

FINAL REPORT

HAZARDOUS MINE OPENING PROJECT 25

MONT A/E 89-46-108

Blue Eyed Nellie, Georgetown, Heber,
Red Lion and Silver Lake Mining Districts

Deer Lodge and Granite Counties
Western Montana

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MONT A/E 89-46-108**

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Deer Lodge and Granite County**



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**HAZARDOUS MINE OPENING PROJECT; PHASE 25, PROJECT 25
MONT A/E 89-46-108**

**Blue Eyed Nellie, Georgetown, Heber, Red Lion and Silver Lake Mining Districts,
Deer Lodge and Granite County**

Prepared for:

Department of State Lands
Abandoned Mine Bureau

Prepared by:

Chen-Northern, Inc.
1610 B Street
Helena, MT 59604

(406)443-5210

December 19, 1990

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1.0 INTRODUCTION

Hard rock mining has taken place in Montana since 1862 and was essentially unregulated from a reclamation standpoint for over one hundred years. This resulted in thousands of unprotected shafts and adits in mining districts across the state. The hazards associated with these mine openings are many and range from bad air, to falling and cave-ins.

1.1 SITE DESCRIPTION

The sites included in Hazardous Mine Opening Project; Phase 25, Project 25 (HMO Project 25) are located in or near residential areas, historic sites, close to public roads or in recreation areas. All mine openings threatened public safety. The shafts involved were deep enough to prevent unaided escape upon entry. Adits were accessible to the curious, exposing dangerous underground workings and unsuspected dangers.

1.2 SITE LOCATIONS

This project included approximately 103 openings at 52 sites located in the Blue Eyed Nellie, Georgetown, Heber, Red Lion and Silver Lake mining districts of Deer Lodge and Granite Counties, Montana. Legal descriptions of all sites constructed are listed in Table 1-1. Site locations are shown on the vicinity and hazard maps contained in Appendix A.

1.3 PROJECT OBJECTIVES

HMO Project 25 was designed and executed with the intent of eliminating accidental or unauthorized entry to mine openings that exposed unknown hazards at a number of abandoned hard rock mines in Deer Lodge and Granite Counties, Montana. Backfilling was the preferred reclamation option for closing hazardous adits and shafts but alternative methods (eg. grates, culverts, fencing) were utilized at the owner's request to preserve access.

TABLE 1-1
HAZARDOUS MINE OPENING PROJECT 25
SITE LOCATIONS

PA #	COUNTY	MINING DISTRICT	SITE NAME	LEGAL DESCRIPTION
----	-----	-----	-----	-----
12-001	Deer Lodge	Blue Eyed Nellie	Blue Eyed Nellie	T05N R12W S14 SW SE
12-064	Deer Lodge	Blue Eyed Nellie	Buck Gulch	T05N R12W S10 SE SE
12-055	Deer Lodge	Blue Eyed Nellie	Foster Creek	T05N R12W S08 NE SW
12-035	Deer Lodge	Blue Eyed Nellie	Gladstone	T05N R12W S13 SW, 14
12-031	Deer Lodge	Blue Eyed Nellie	Homestake	T05N R12W S14 NW NE
12-030	Deer Lodge	Blue Eyed Nellie	Keystone	T05N R12W S14 NE NW
12-034	Deer Lodge	Blue Eyed Nellie	Mohawk	T05N R12W S24 NW NW
12-036	Deer Lodge	Blue Eyed Nellie	Mountain View	T05N R12W S14 NW SE
12-074	Deer Lodge	Blue Eyed Nellie	NW NE Section 2	T05N R12W S02 NW NE
12-075	Deer Lodge	Blue Eyed Nellie	NW NW Section 2	T05N R12W S02 NW NW
12-032	Deer Lodge	Blue Eyed Nellie	NW NW Section 25	T05N R12W S25 NW NW
12-037	Deer Lodge	Blue Eyed Nellie	SE NE Section 14	T05N R12W S14 SE NE
12-049	Deer Lodge	Blue Eyed Nellie	SE NW Section 26	T05N R12W S26 SE NW
12-065	Deer Lodge	Blue Eyed Nellie	SE NW Section 9	T05N R12W S09 SE NW
12-063	Deer Lodge	Blue Eyed Nellie	SE SW Section 22	T05N R12W S22 SE SW
12-072	Deer Lodge	Blue Eyed Nellie	SW NW Section 10	T05N R12W S10 SW NW
12-061	Deer Lodge	Blue Eyed Nellie	SW SW Section 21	T05N R12W S21 SW SW
12-048	Deer Lodge	Blue Eyed Nellie	Sheridan	T05N R12W S25 SW SW
12-076	Deer Lodge	Georgetown	NW NE Section 8	T05N R13W S08 NW NE
12-067	Deer Lodge	Georgetown	NW SW Section 9	T05N R13W S09 NW SW
12-009	Deer Lodge	Georgetown	Orofino	T05N R13W S04 SE SW
12-054	Deer Lodge	Georgetown	Pleideus	T05N R13W S04 NW SW
12-066	Deer Lodge	Georgetown	Trilby	T05N R13W S09 NE NW
12-024	Deer Lodge	Heber	Alpha	T04N R11W S22 NW NE
12-047	Deer Lodge	Heber	Moonlight	T04N R11W S22 SW SE
12-044	Deer Lodge	Heber	Pennsylvania	T04N R11W S22 NW NE
12-043	Deer Lodge	Heber	SW SE Section 15	T04N R11W S15 SW SE
12-046	Deer Lodge	Heber	SW SE Section 33	T04N R11W S33 SW SE
12-058	Deer Lodge	Silver Lake	Clay Charlie Gulch	T05N R12W S06 NW NW
12-069	Deer Lodge	Silver Lake	Daly Gulch Placer	T05N R13W S16 SE NW
12-068	Deer Lodge	Silver Lake	Gold Coin 8	T05N R13W S16 SW SW
12-060	Deer Lodge	Silver Lake	Lucky Blue	T05N R12W S18 SW NW
12-045	Deer Lodge	Silver Lake	NE SE Section 7	T04N R13W S07 NE SE
12-051	Deer Lodge	Silver Lake	NW SW Section 27	T05N R13W S27 NW SW
12-059	Deer Lodge	Silver Lake	New Year	T05N R12W S06 SW SE
12-011	Deer Lodge	Silver Lake	Old Bonanza	T05N R13W S21 NE SE
12-073	Deer Lodge	Silver Lake	Red Rose	T05N R13W S20 NE NE
12-052	Deer Lodge	Silver Lake	SE SW Section 33	T05N R13W S33 SE SW
12-071	Deer Lodge	Silver Lake	SW NW Section 21	T05N R13W S21 SW NW
12-057	Deer Lodge	Silver Lake	SW SW Section 23	T05N R13W S23 SW SW
12-040	Deer Lodge	Silver Lake	Silver Moss	T05N R13W S27 SE NW
12-041	Deer Lodge	Silver Lake	Sunshine	T04N R13W S07 SW SW
12-050	Deer Lodge	Silver Lake	Trigger	T05N R13W S28 SW NE
20-170	Granite	Red Lion	Big Bill	T06N R13W S13 NW SW
20-203	Granite	Red Lion	Gold Brick	T06N R13W S14 SE SE
20-204	Granite	Red Lion	Nut Pine	T06N R12W S07 SW SW
20-169	Granite	Red Lion	Savage	T06N R13W S14 NW SE
20-164	Granite	Silver Lake	Lost Track	T04N R14W S12 SW NE
20-162	Granite	Silver Lake	Minnie Lee	T04N R14W S12 NW NE
20-168	Granite	Silver Lake	SE NE Section 11	T04N R14W S11 SE NE
20-166	Granite	Silver Lake	SE NW Section 12	T04N R14W S12 SE NW
20-161	Granite	Silver Lake	SE SW Section 1	T04N R14W S01 SE SW

1.4 MINING DISTRICT HISTORY

BLUE EYED NELLIE - The Blue Eyed Nellie district is 6 miles west of Anaconda. Stark dead trees cover much of the surface of the district which are attributed to a fire sometime between 1890 and 1906. Small mines and prospects showing metalliferous ores occur over a large area of mineralized county. District production, virtually all of which came from the Blue Eyed Nellie mine, probably included about 600,000 ounces of silver and 9 million pounds of lead, estimated to have been worth \$1 million.

GEORGETOWN - The Georgetown district, including the mines of Southern Cross, is in the northwest corner of Deer Lodge County, about 15 miles west of Anaconda. The district was established prior to 1870 upon discovery of placer deposits. The most active period of lode mining came during the 1880's and 1890's, although there was intermittent small scale activity until 1951. The total district production is estimated to have brought nearly \$6.5 million, from approximately 272,000 ounces of gold, 316,000 ounces of silver, and 1,000,000 pounds of copper.

HEBER - The Heber district is on Mill Creek a few miles south of Anaconda. The area has not been important as a producer of metallic ores. The recorded production includes ores which carried gold, silver, a little copper and some lead.

RED LION - The Red Lion district is in the southeastern part of Granite County, southeast of Philipsburg. Mining activity in the district began in the late 1880's shortly after which a ten stamp mill was constructed. In 1901 the mining properties were ambitiously developed and promoted by the Milwaukee Gold Extraction Company who constructed a new 100 ton amalgamation and cyanidation mill as well as a 3,800 foot aerial tramway to carry ore from the mines to the new mill. The estimated value of total production from the district is \$137,944, from 5,700 ounces of gold, 11,000 ounces of silver, and 1,400 pounds of copper.

SILVER LAKE - The history of the Silver Lake district, which began with the discovery of gold in 1889, is basically the story of the Gold Coin Mine. By 1906 the Gold Coin was in full production, a 30 stamp mill was in use to pulverize the ore, and gold was recovered by pan amalgamation. Operations continued until the end of 1912. The depression in the 1930's reopened the mine and it operated continuously through 1940. During this period

a cyanidation circuit was added to the mill, and in addition to considerable tonnage of mine ore, all precyanidation mill tailings were reprocessed. Gold production for the 10 years nearly doubled the mine's previous total. Total production from the Gold Coin, included the Daly Gulch placer, is estimated to include nearly 35,000 ounces of gold and 133,000 ounces of silver, valued at the time of sale at slightly more than \$1 million. Production from other mines in the district prior to 1906 totaled about \$82,000, included 50,000 ounces of silver, 125 ounces of gold, 95,000 pounds of lead, 55,000 pounds of zinc, and 2,500 pounds of copper.

2.0 RESPONSIBLE PARTIES

The following people/firms have contributed to the coordination, design, execution, and inspection of HMO Project 25:

♦	PROJECT COORDINATION & DESIGN	Chen-Northern, Inc. 1610 B Street P.O. Box 4699 Helena, MT 59604
♦	ENGINEERING PLAN PREPARATION	Chen-Northern, Inc. 1610 B Street P.O. Box 4699 Helena, MT 59604
♦	CONTRACTOR	Skinner Enterprises 1925 Poplar Helena, MT 59601
♦	QUALITY CONTROL INSPECTION	Chen-Northern, Inc. Joe Murphy, Project Inspector
♦	AMRB COORDINATION	Ed Gensler

3.0 CHRONOLOGICAL LISTING OF EVENTS

HMO Project 25 was constructed during 1989 and 1990. The Contractor performed all construction activities according to contract specifications and within the time allowed. The following section describes the sequence of events and milestones for the project.

3.1 PRE-BID CONFERENCE

A pre-bid conference was held on August 12, 1989, at the Montana Department of State Lands in Helena. A slide show was presented to acquaint prospective bidders with site conditions since it was not practical for most contractors to visit each site. The slide presentation included a narrative describing site access and construction considerations for specified reclamation.

3.2 PROJECT BIDS

The Montana Department of Administration, Architecture and Engineering Division publicly opened bids for HMO Project 25 (MONT A/E 89-46-108) on August 10, 1989. The three lowest bids are presented below. Complete bid tabulation results are presented as Appendix B.

Skinner Enterprises, Helena, MT	\$83,110.00
Swan and Sons, Anaconda, MT	\$85,497.00
Coleman Construction, Dillon, MT	\$93,660.00

3.3 PROJECT CHRONOLOGY

HMO Project 25 was completed over the course of two construction seasons within the allowed time. There was a work stoppage over the winter period. In addition, work was suspended in June due to heavy snow accumulations at the higher elevation (8500') sites in the Blue Eyed Nellie mining district. These areas became accessible by late July and the remaining work was completed. The following chronology presents the sequence of events that lead to completion of the project.

CONTRACTOR	Skinner Enterprises
NOTICE OF AWARD	August 21, 1989
NOTICE TO PROCEED	August 30, 1989
CONSTRUCTION START-UP	September 1, 1989
WINTER SHUT-DOWN	November 7, 1989
SPRING START-UP	April 23, 1990
SHUT-DOWN	June 19, 1990
START-UP	July 23, 1990
SUBSTANTIAL COMPLETION	August 1, 1990
FINAL ACCEPTANCE	August 7, 1990

3.4 CHANGE ORDERS

Three change orders were issued during HMO Project 25 for a net change in contract price of (+) \$ 16,887.90 or 16.9% of the contract total. The purpose of these change orders include modifying the reclamation specified for a site to a more appropriate closure. Table 3-1 presents a summary of project change orders. Appendix C contains copies of the Change Orders issued for the project.

**TABLE 3-1
CHANGE ORDER SUMMARY**

CHANGE ORDER	AMOUNT	DATE
Change Order No. 1	(\$ 5,564.10)	November 1, 1989
Change Order No. 2	(\$ 2,925.30)	July 20, 1990
Change Order No. 3	\$25,377.00	August 31, 1990

4.0 PROJECT CONSTRUCTION

4.1 DESCRIPTION OF PROJECT PLAN

HMO Project 25 was designed and implemented with the intent of eliminating accidental or unauthorized entry to mine openings exposing unknown hazards at a number of abandoned hard rock mines in Deer Lodge and Granite Counties.

Backfill was recommended for all mine openings to permanently eliminate the hazards associated with abandoned adit and shaft openings. However, many landowners and/or claimants refused to allow backfill, therefore accessing bulkheads (steel grates, culverts, cable nets or adit doors) or farm type 5-wire fences were installed. These alternative methods do accomplish the goals of preventing accidental entry but are semi-permanent in nature and are subject to vandalism.

Steel grate systems used as shaft closures were fabricated by an independent contractor. The grates were available for transport to Project 25 sites at the start of the project. This arrangement resulted in cost savings and eliminated the need for additional contract time (which would have been necessary if grate fabrication had been the responsibility of the construction contractor).

Landowners whose property(s) were afforded semi-permanent, locking closures were sent a release form from DSL to sign and return regarding the condition of their underground workings. Table 4-1 presents the status of the key receipts and the signed forms are included as Appendix D.

4.2 CONTRACTOR'S OPERATION

The project was performed utilizing a crew of two to three men. Mike Skinner was the field superintendent during the project and the construction crew consisted of Lloyd Baker, Dave Carson, Charlie Carson, Karl Rose and Andy Skinner.

TABLE 4-1
KEY RECEIPT ACKNOWLEDGEMENT STATUS

MINING DISTRICT	SITE NAME	NO.	CLOSURE	LANDOWNER	KEY RECEIPTS
Blue Eyed Nellie	Mohawk	10-16	Adit Gate	Harry & Carole Payne	Yes
Heber	Alpha Moonlight	2-3 1-4	Grate Cable Net	James Miller	Yes
Red Lion	Big Bill	2-1	Grate	William Flynn	Yes
Red Lion	Nut Pine	4-8	Grate	Fred Earll	Yes
Silver Lake	Clay Charlie Gulch	1-2	Cable Net	Patricia Easthom	Yes
Silver Lake	Gold Coin #8	4-6	Grate	Asarco, Inc. % Chris Phaechl	No
Silver Lake	Lost Track	5-9	Culvert	Ronald Eccleston	Yes
Silver Lake	Minnie Lee	20-11	Culvert	Ronald Eccleston	Yes
Silver Lake	New Year	14-16	Grate	Norma Lamberg	Yes
Silver Lake	Old Bonanza	11-18 11-19 11-20	Culvert Culvert Culvert	Mary McCabe	Yes
Silver Lake	SE NW Section 12	23-24	Grate	Ronald Eccleston	Yes
Silver Lake	Sunshine	17-33	Grate	James Young	No
Silver Lake	Trigger	18-35 18-36 18-37	Culvert Lock Culvert	Don & Virginia Loranger Robert S. McKay	Yes Yes

The following list identifies the major equipment used by Skinner Enterprises to complete HMO Project 25.

Case 880 Trackhoe
John Deere Dozer
Case 580 B Backhoe
Terex Loader

4.3 CONSTRUCTION ACTIVITIES/QUANTITIES USED

The Contractor performed the following work during HMO Project 25:

- ♦ Backfilled 20 mine openings with 2,350.4 cubic yards of material
- ♦ Blasted and collapsed 21 mine openings
- ♦ Installed 10 adit culverts with locking hatches
- ♦ Installed 3 cable net closures
- ♦ Installed 1 steel gate adit doors
- ♦ Installed 8 steel grate systems with locking hatches
- ♦ Installed 72 Owner-provided hazard signs
- ♦ Erected 8051 linear feet of farm type 5-wire fence
- ♦ Seeded, fertilized and mulched all areas disturbed by construction operations

5.0 PROJECT COSTS

5.1 PAYMENT REQUESTS

The total contract amount of HMO Project 25 was \$ 99,997.90 compared to the engineers estimate of \$135,400. Table 5-1 presents a summary of the approved payment requests issued for HMO Project 25. Appendix E contains copies of these documents, the Certificate of Substantial Completion and the Affidavit on Behalf of Contractor.

TABLE 5-1
PAYMENT REQUEST SUMMARY

PAYMENT REQUEST	AMOUNT	DATE
Payment Request No. 1	\$ 22,519.35	October 6, 1989
Payment Request No. 2	\$ 22,767.66	November 7, 1989
Payment Request No. 3	\$ 34,031.25	June 19, 1990
Final Payment Request	\$ 20,679.64	November 30, 1990
Total Contract Amount	\$ 99,997.90	

5.2 COST PER DISTRICT/MINE OPENING

The cost of reclamation performed in the five mining districts is presented in Table 5-2. These totals include fabrication cost of the steel grate sections which were provided to the contractor to install for the project. Appendix F contains a summary of project quantities and details the costs for each mine opening involved in HMO Project 25.

5.3 PROFESSIONAL SERVICE FEES

Services provided by Chen-Northern, Inc. included landowner consent, budget preparation, grant application, weed board approval, basic engineering, construction contract administration, quantity accounting and full time resident inspection. The project included 52 sites in two counties resulting in extensive travel time. Construction activities were performed during two construction seasons. Resolving several unusual situations caused by the Contractor's operation (ore car theft, bridge collapse, safety violations) resulted in the expenditure of additional management hours. These occurrences significantly increased Chen-Northern's inspection costs and are described in detail in subsequent sections of this report. An analysis of these fees in relation to the Total Project Cost is included as Table 5-3.

TABLE 5-2
COST PER DISTRICT
(including steel grate fabrication costs)

MINING DISTRICT	COST
Blue Eyed Nellie	\$ 33,517.72
Georgetown	\$ 10,046.76
Heber	\$ 8,936.22
Red Lion	\$ 12,902.37
Silver Lake	\$ 42,948.87
TOTAL PROJECT AMOUNT	\$108,351.94

TABLE 5-3
ANALYSIS OF PROFESSIONAL SERVICE FEES
HAZARDOUS MINE OPENING PROJECT 25

DESIGN COST - Grant Preparation, Site Evaluation, Engineering and Bid Documents	\$ 6,721.77
INSPECTION COSTS - Construction Administration, Construction Inspection, and Final Report	<u>\$ 45,054.70</u>
CHEN-NORTHERN COSTS	\$ 51,776.47
STEEL GRATE FABRICATION COSTS	\$ 8,354.04
CONTRACTORS CONSTRUCTION COSTS	<u>\$ 99,997.90</u>
TOTAL HMO PROJECT 25 CONSTRUCTION COSTS	\$ 108,351.94

PERCENTAGE ANALYSIS

Chen-Northern Design Cost/Total Construction Cost	62%
Chen-Northern Inspection Cost/Total Construction Cost	41.6%
Total Chen-Northern Cost/Total Construction Cost	47.8%

6.0 PROJECT SUMMARY

6.1 SUMMARY OF PROJECT

Appendix F contains a reconciliation of the work specified in the contract documents compared to what was actually constructed at each site involved in HMO Project 25. Table 6-1 summarizes these project statistics. Numerous openings, found during the course of construction, were added to the project and others were deleted due to their natural collapse since the time of inventory. Other changes resulted from directives issued by new owners or lessees not originally contacted for reclamation consent.

TABLE 6-1
RECLAMATION CLOSURES SPECIFIED VS. CONSTRUCTED

RECLAMATION	NUMBER SPECIFIED	NUMBER CONSTRUCTED
Steel Grate Systems	14	8
Adit Culverts	14	9
Adit Gates	2	8
Cable Nets	3	3
Blasts	17	21
Backfill	1450 (c.y.)	2350.4
Farm Fence	3912 (l.f.)	8051
Signs	60	72

Although additional mine openings were located in the project area and owner consent was obtained for reclamation, the Contractor refused to perform the work at contract unit prices. Consequently, these additional sites were reclaimed by Change Order (at HMO Project 25 unit prices) as part of Hazardous Mine Opening Project 26.

Two other incidents involving the Phase 25 Contractor, Skinner Enterprises, should be noted. On September 26, 1989 the Contractor removed an ore car from an adit, in the Georgetown district, belonging to Magellan Resources in order to facilitate the installation of an adit culvert. The Contractor, against the advise of the Project Inspector, proceeded to transport the ore car to his equipment staging area, several miles away, where it was subsequently stolen. The Contractor eventually made restitution to Magellan Resources for the loss of the ore car.

On October 4, 1989 the Contractor's Field Superintendent and the Project Inspector examined a small bridge in the Silver Lake district for it's capability to withstand the load exerted by a Case 880 Trackhoe. At that time the Superintendent determined that the bridge would withstand the load and could be successfully crossed. Nonetheless, the Case 880 Trackhoe collapsed the bridge into a channel of Storm Lake Creek. No injuries were sustained nor was there significant pollution to the stream. Bridge debris was promptly cleared from the stream channel and approaches graded to allow fording of the stream. The Contractor notified the bridge owner, Washington Corporation of Missoula, who in turn stated that the bridge need not to be replaced.

6.2 SITE CONDITIONS AFTER COMPLETION

On August 7, 1990 AMR representative and Project Inspector conducted a final acceptance inspection of work performed on HMO Project 25. The following observations were noted:

A culvert installed at the Silver Lake District/Old Bonanza Site #11-20 had been removed and mining/exploration operations conducted. The culvert had not been removed intact as the locking hatch cover assembly (with lock attached) was lying in a pile of debris and the culvert had been discarded in three mangled pieces. No one was around at the time, however the mine opening was obstructed with a large piece of equipment. The culvert was installed on September 26, 1989 and the landowner was sent the hatch keys on November 7, 1989. On November 14, 1989, the hatch key Return Receipt Form was signed and returned by the landowner.

Farm fences installed at the Big Bill sites #2-2 and #2-3 in the Red Lion District had experienced damage due to heavy snow loads. Several strands of wire were broken and the remaining strands stretched to near the breaking point. Line posts had been moved up to

three inches at the base and all metal fence stays accorded into a chorus of "Zs" along each reach of fence. This occurred as a result of the freezing and thawing cycle at elevations of 8400 feet, where there are accumulations in excess of 100 inches of snow. Farm fence installations at locations where snow accumulations are greater than the height of the fence itself may not be practical.

6.3 MONITORING AND MAINTENANCE

Periodic monitoring of sites backfilled during the project for subsidence should be conducted to ensure adequacy of the fill. Landowners were offered a "permanent" closure by selecting the backfill option. To minimize any liability to the State, all backfilled mine openings should be inspected on an annual basis for several years following completion of the project. The semi-permanent closures (culverts, cable nets, steel grates etc.) installed during the project may protect against unauthorized entry for a limited time. Vandalism and damage due to natural causes has been, and will continue to be a problem with these types of closures. To reduce the public safety hazard associated with damaged closures, a monitoring program should be instituted to inspect all bulkheads and fences periodically. Any human or naturally caused damage should be reported to landowners for their own repair.

Revegetation efforts should be monitored over several years after construction. The results of vegetation inspections on reclaimed sites will provide data on species which can successfully revegetate mined areas. The presence or absence of weeds should also be documented for future weed control plans.

7.0 COMMENTS

Two incidents occurred during the course of HMO Project 25 construction relating to safety that should be noted. The first incident was not witnessed by the Project Inspector but was related to him by the Contractor, Andy Skinner, as well as two members of the work crew.

After completing work on May 17, 1990, in the Heber district at approximately 7:30p.m. the Project Inspector left the site while the contractor was gathering his equipment, gear and materials used on the job that day. While driving down an apparently steep hill a fuel can containing regular gasoline fell forward in the back of the Contractor's pickup truck and lodged against a 12V battery used to start a welding machine. In a very short time fuel leaked from the can and an arc occurred and ignited a fire. As related to the Inspector the following day, flames 4 to 6 feet in height occurred above the pickup box. The Contractor immediately stopped the vehicle and began removing materials and equipment from the truck while members of the crew attempted to extinguish the fire using the remaining drinking water, soil and sand from the roadway. It should be noted that the Contractor did have a fire extinguisher, however, it was located under fencing materials on the bottom of the pickup box which was on fire. Other items in the pickup at the time included cutting torches with acetylene and oxygen bottles, 5-gallon diesel fuel containers (empty), a pressurized can of starting fluid (ether), one full case of dynamite, a box of blasting caps and a fuel tank of approximately 1 gallon mounted on the welder. Fortunately, no injuries occurred and damage to equipment and materials was moderate.

On May 24, 1990, the Contractor, field superintendent, and Inspector were at the Blue Eyed Nellie district, Sheridan sites preparing to backfill a mine shaft. The Contractor had initially removed surrounding debris and had constructed a roadway from a nearby mine dump to the shaft. Upon completion of this task, the Contractor set the brakes (assumed) on a Terex loader being used at the time, dismounted and approached the Inspector to measure and discuss the quantity of material necessary to adequately obstruct the mine opening. While discussions ensued a mechanical/equipment related noise was heard at which time the Terex loader began rolling backwards down the newly constructed roadway towards the crest of the hill and down a 25° - 30° 1/2 mile long slope. The Contractor ran after and did manage to mount the loader, while it was moving, gain control and stop approximately 5 feet from the edge of the steep slope.

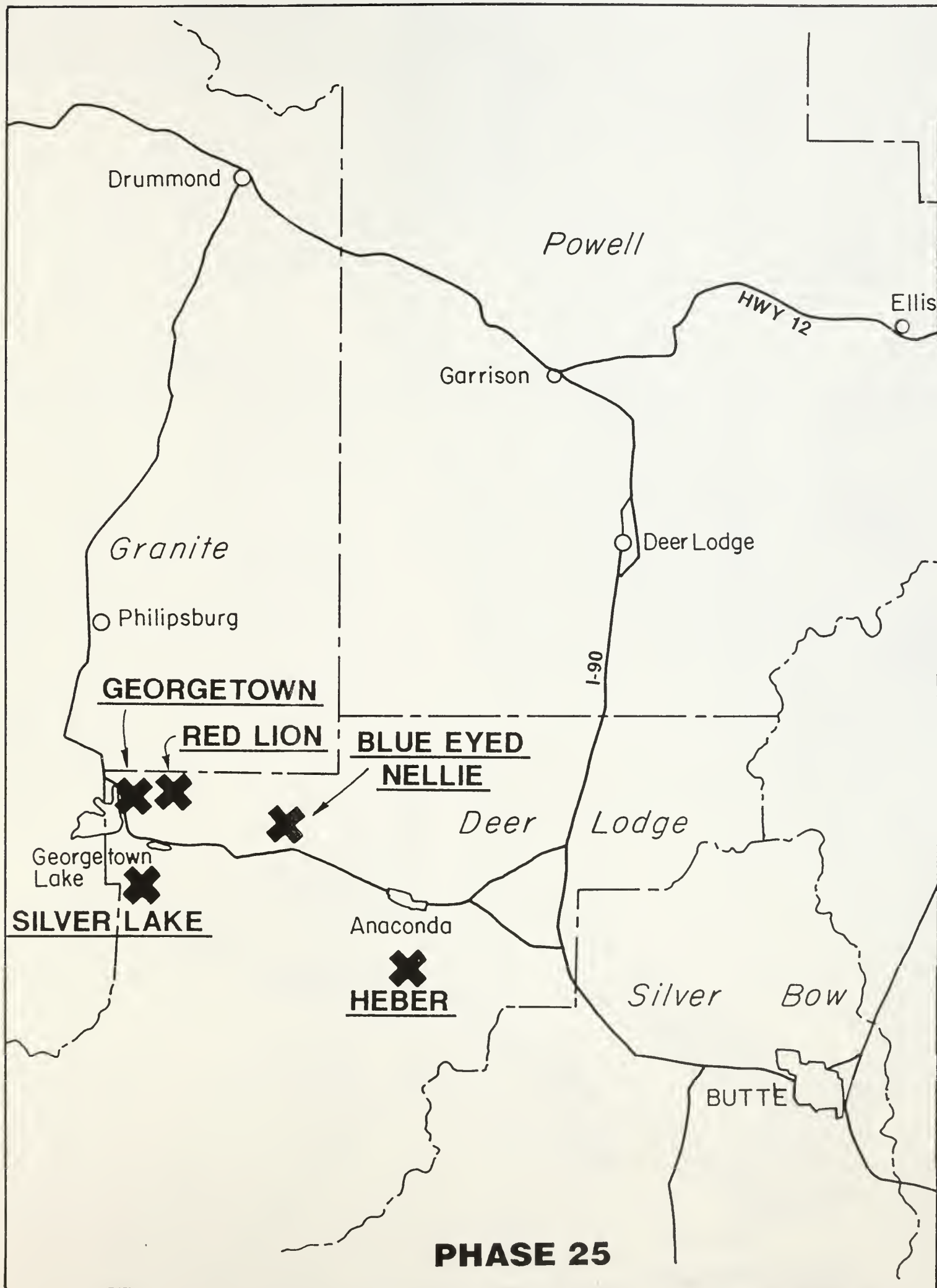
These items were reported by memorandum to the AMRB on who in turn confronted the Contractor on both accounts. A return reply from Skinner Enterprises relayed that the fire incident occurred off-site and after hours and should be of no consequence to the State. No defense was offered regarding the loader incident, instead the Contractor stated that he and his operators had supplementary safety training and that the company's safety record was excellent.

8.0 SLIDES

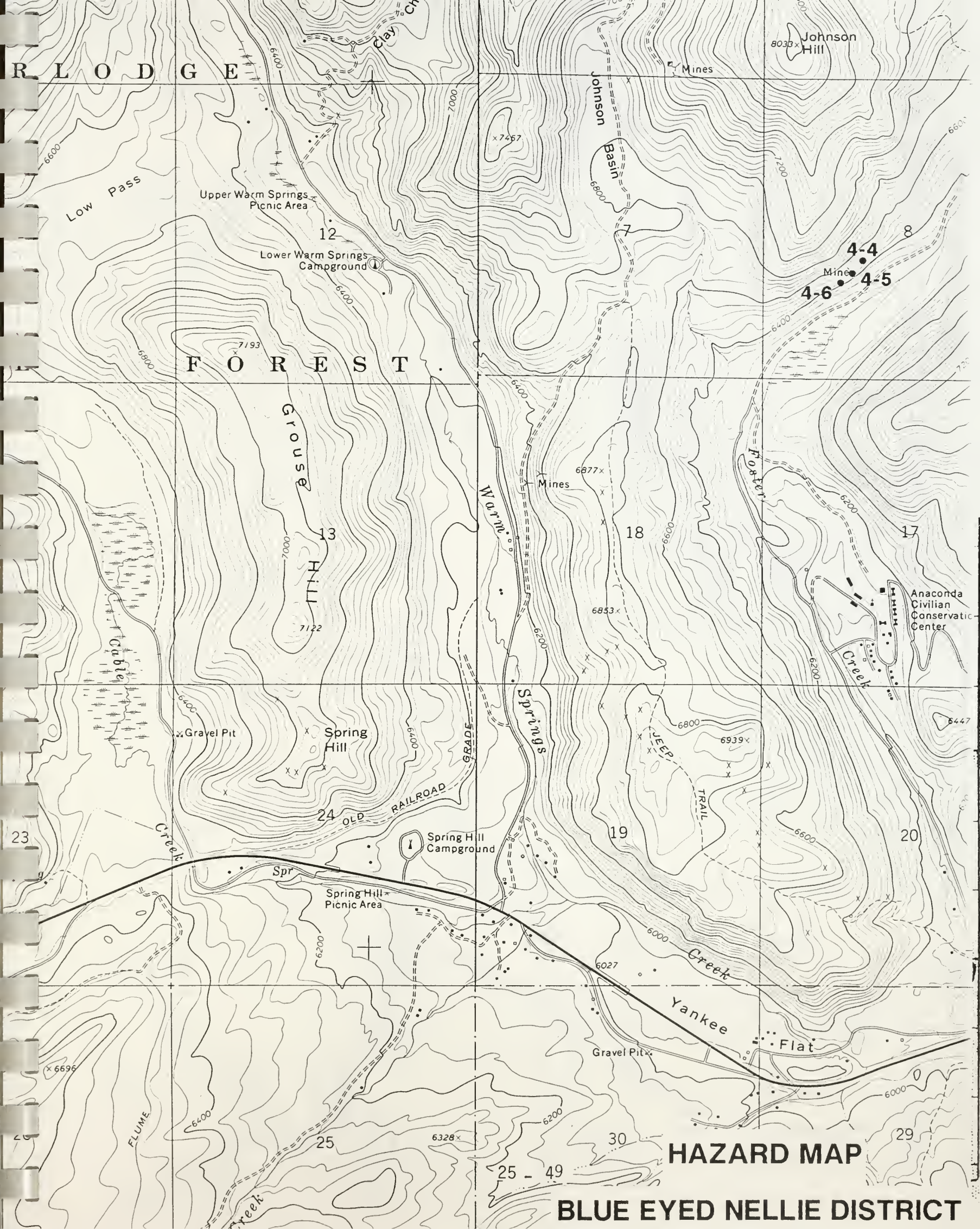
Before, during, and post-construction slide photographs were taken of each opening. These slides and a slide log are contained in Appendix G.

APPENDIX A

VICINITY AND HAZARD MAPS



HAZARDOUS MINE OPENING PROJECT

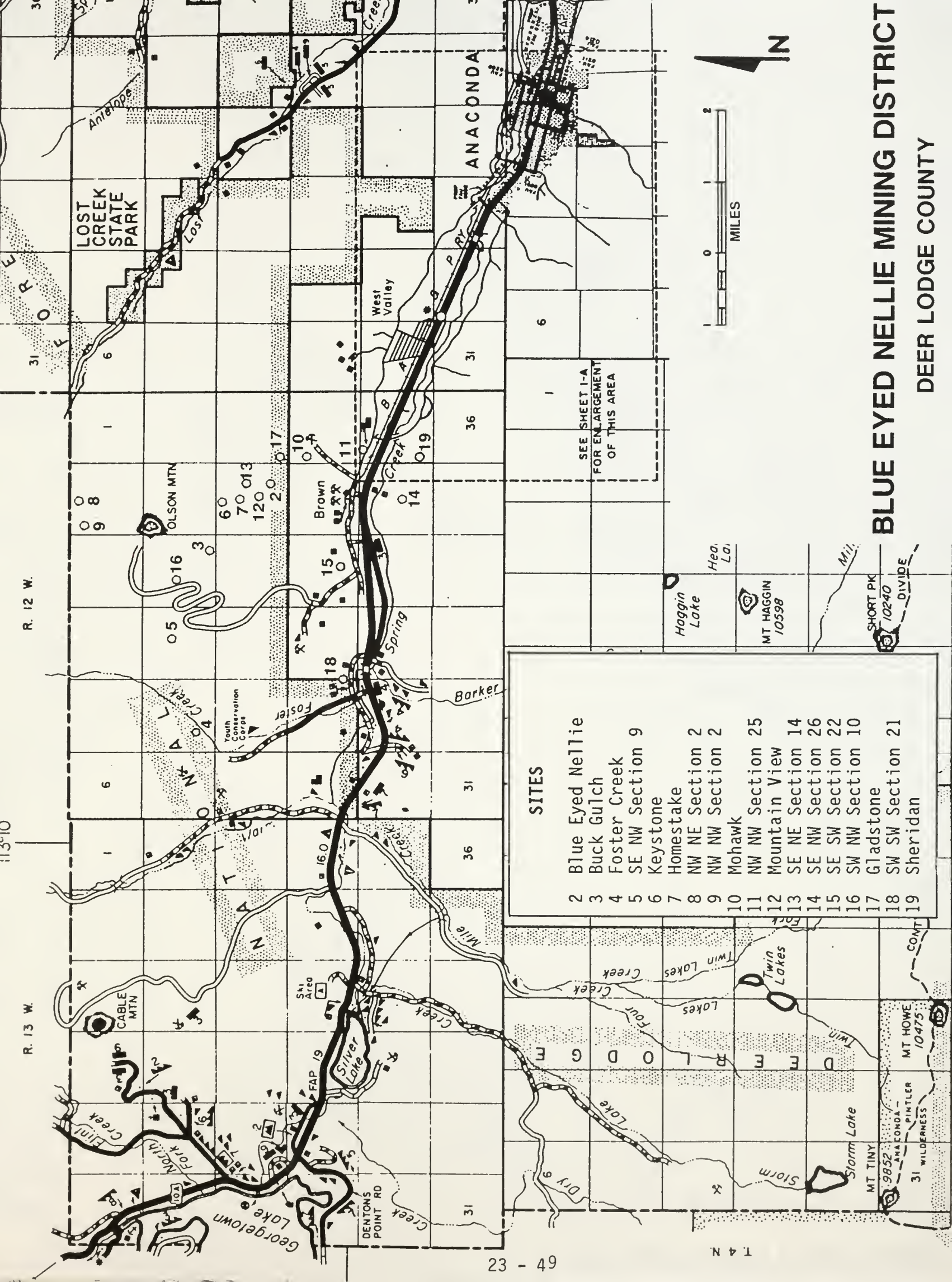


R L O D G E

F O R E S T

HAZARD MAP

BLUE EYED NELLIE DISTRICT

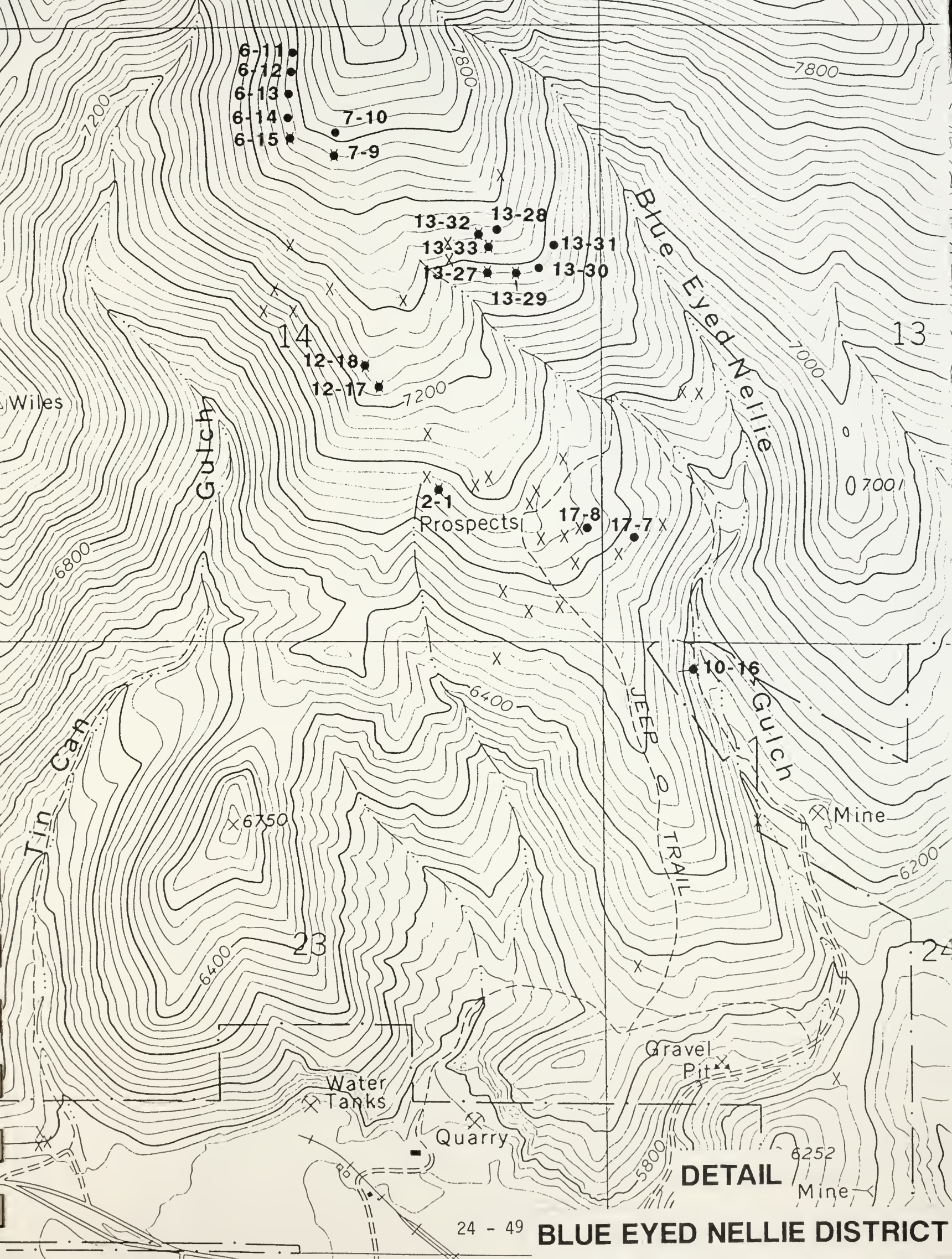


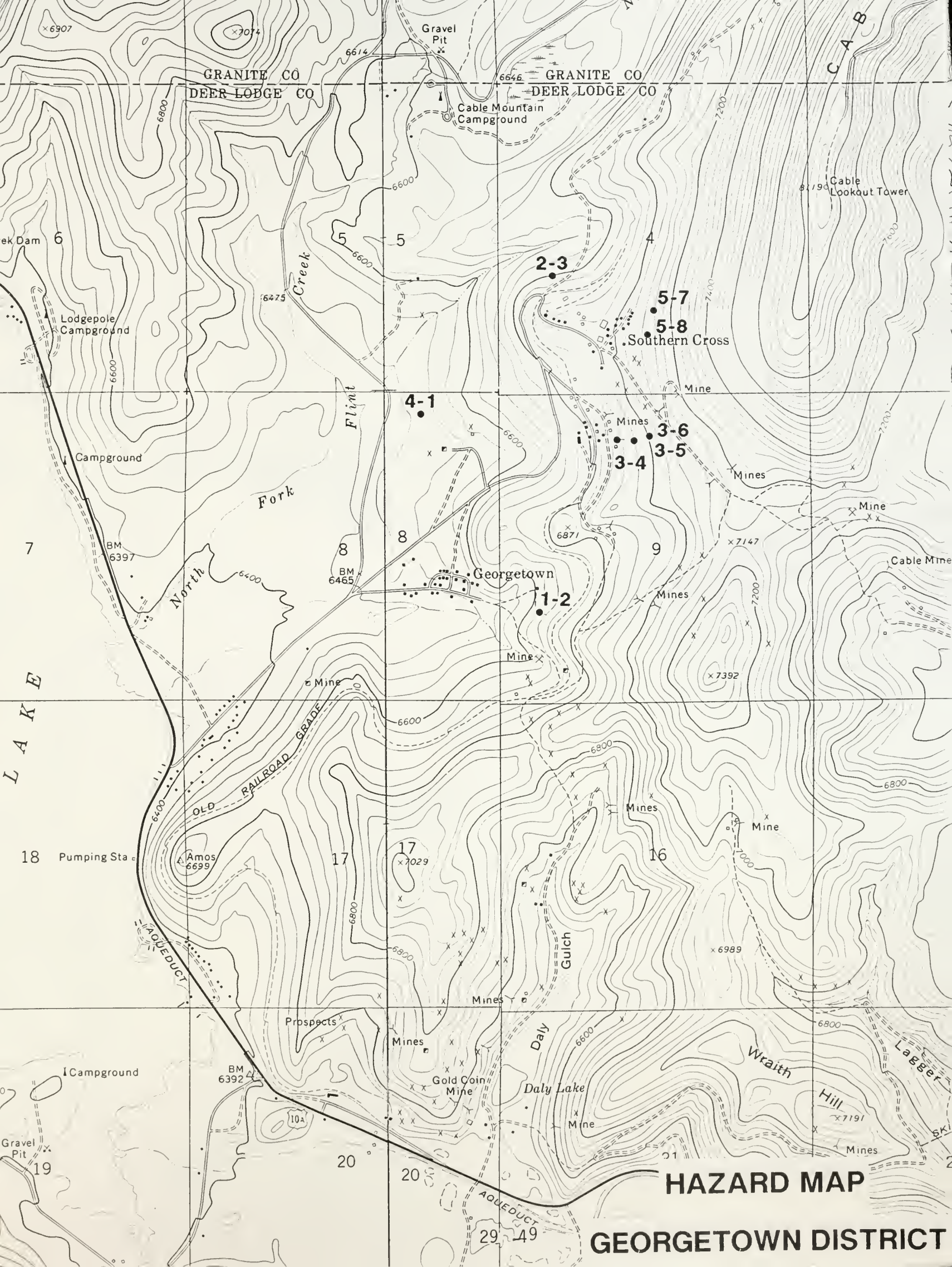
SITES

- | | |
|----|------------------|
| 2 | Blue Eyed Nellie |
| 3 | Buck Gulch |
| 4 | Foster Creek |
| 5 | SE NW Section 9 |
| 6 | Keystone |
| 7 | Homestake |
| 8 | NW NE Section 2 |
| 9 | NW NW Section 2 |
| 10 | Mohawk |
| 11 | NW NW Section 25 |
| 12 | Mountain View |
| 13 | SE NE Section 14 |
| 14 | SE NW Section 26 |
| 15 | SE SW Section 22 |
| 16 | SW NW Section 10 |
| 17 | Gladstone |
| 18 | SW SW Section 21 |
| 19 | Sheridan |

BLUE EYED NELLIE MINING DISTRICT

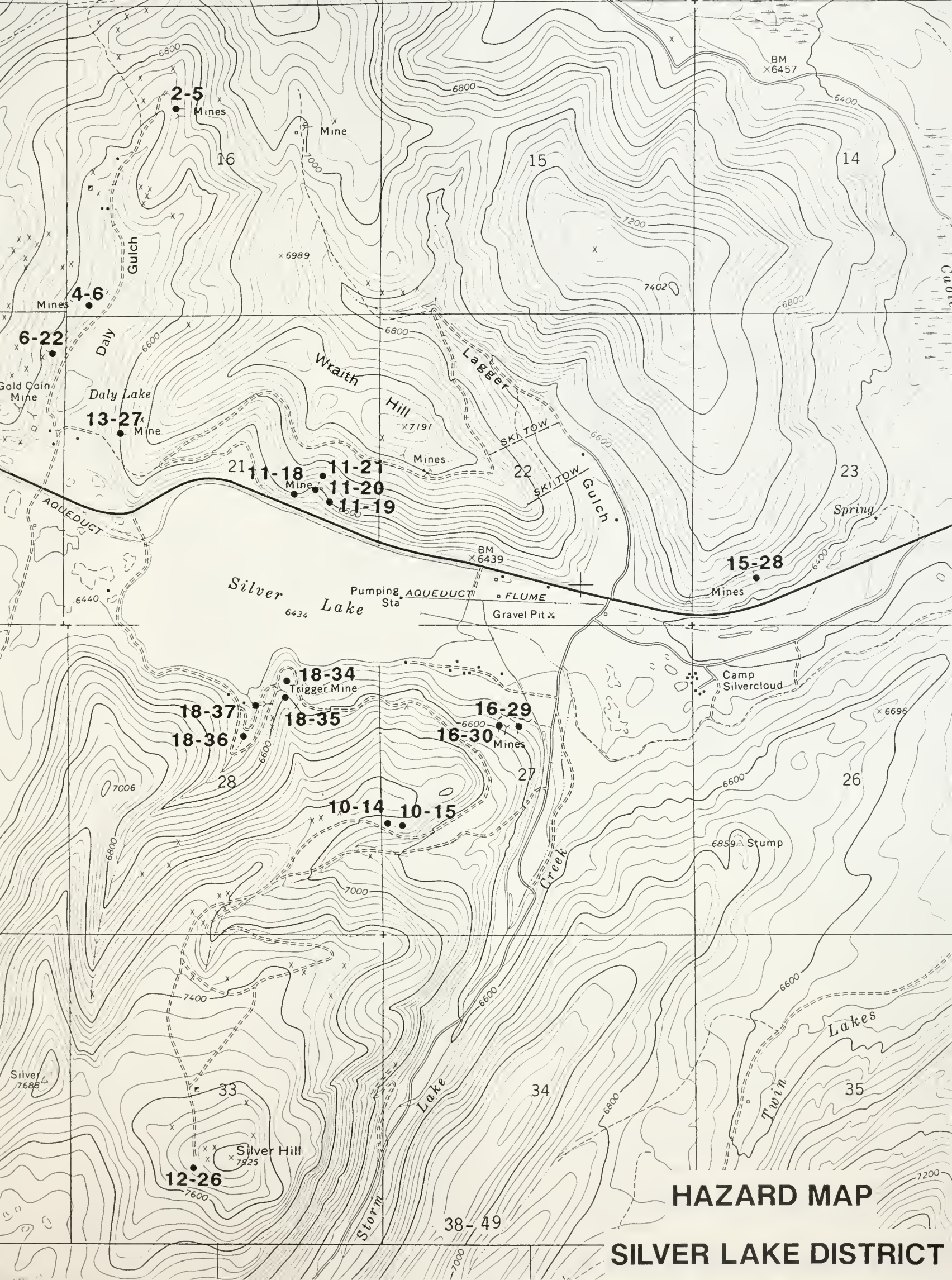
DEER LODGE COUNTY





HAZARD MAP

GEORGETOWN DISTRICT



HAZARD MAP

SILVER LAKE DISTRICT



DEER LODGE
FOR

8-24
8-25
9-25
8-23

GRANITE CO
DEER LODGE CO

5-35
5-36
5-37

3-3
3-2

18-46
18-45
18-44

15-39
15-40
15-41
15-42

SEE DETAIL MAP

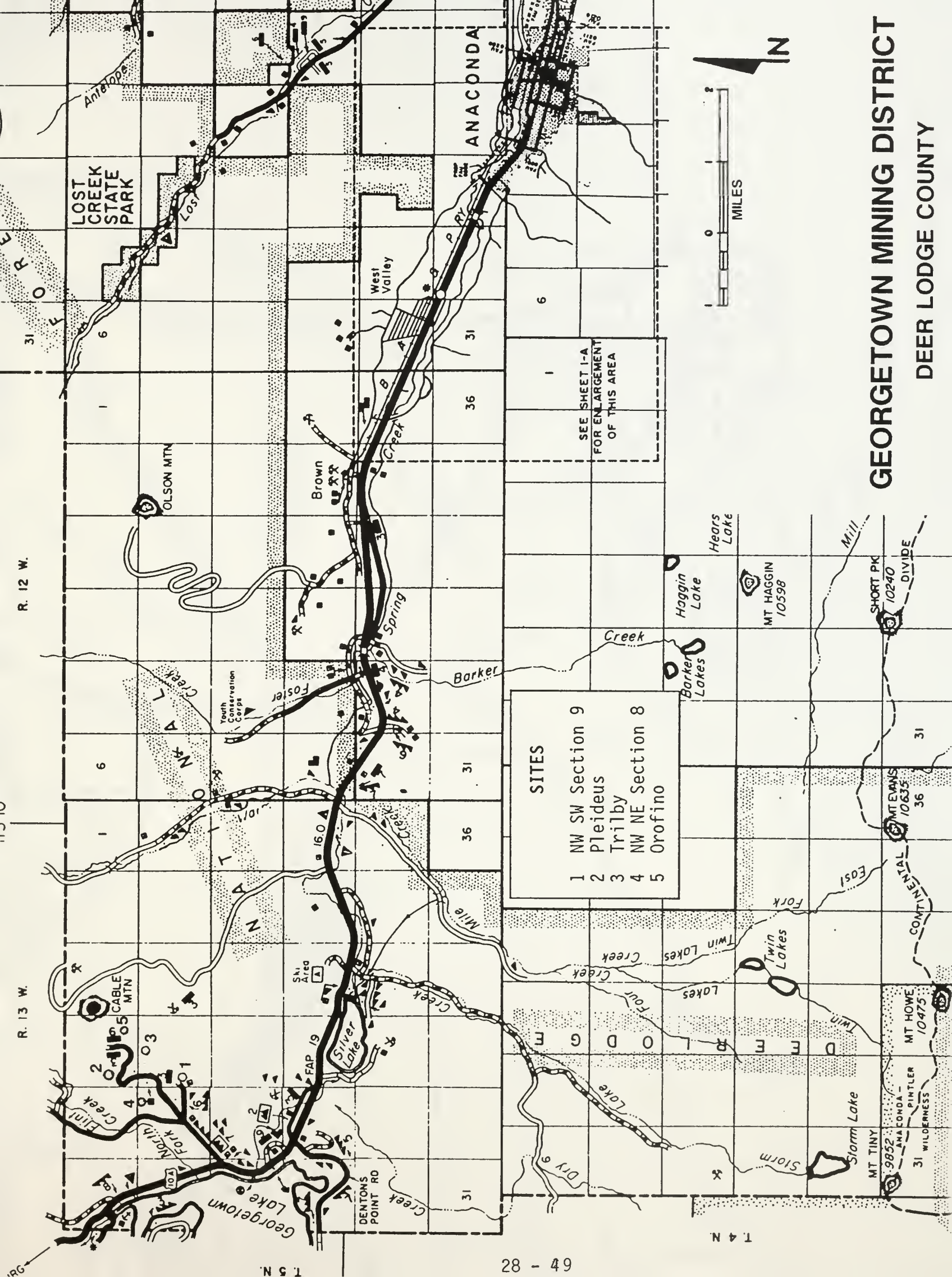
11-26

14-34

19-47
19-48
19-49

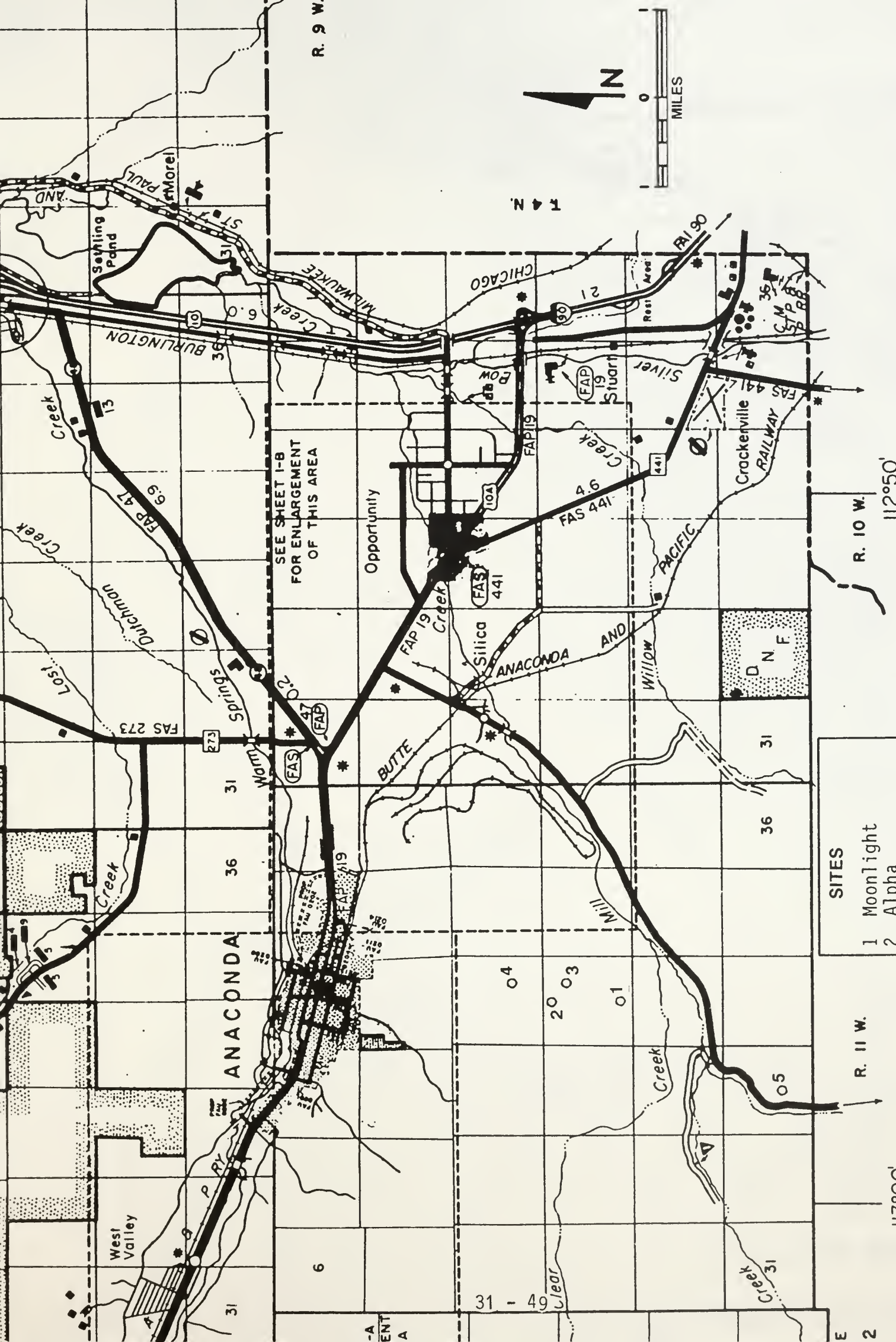
HAZARD MAP

BLUE EYED NELLIE DISTRICT



GEORGETOWN MINING DISTRICT
DEER LODGE COUNTY

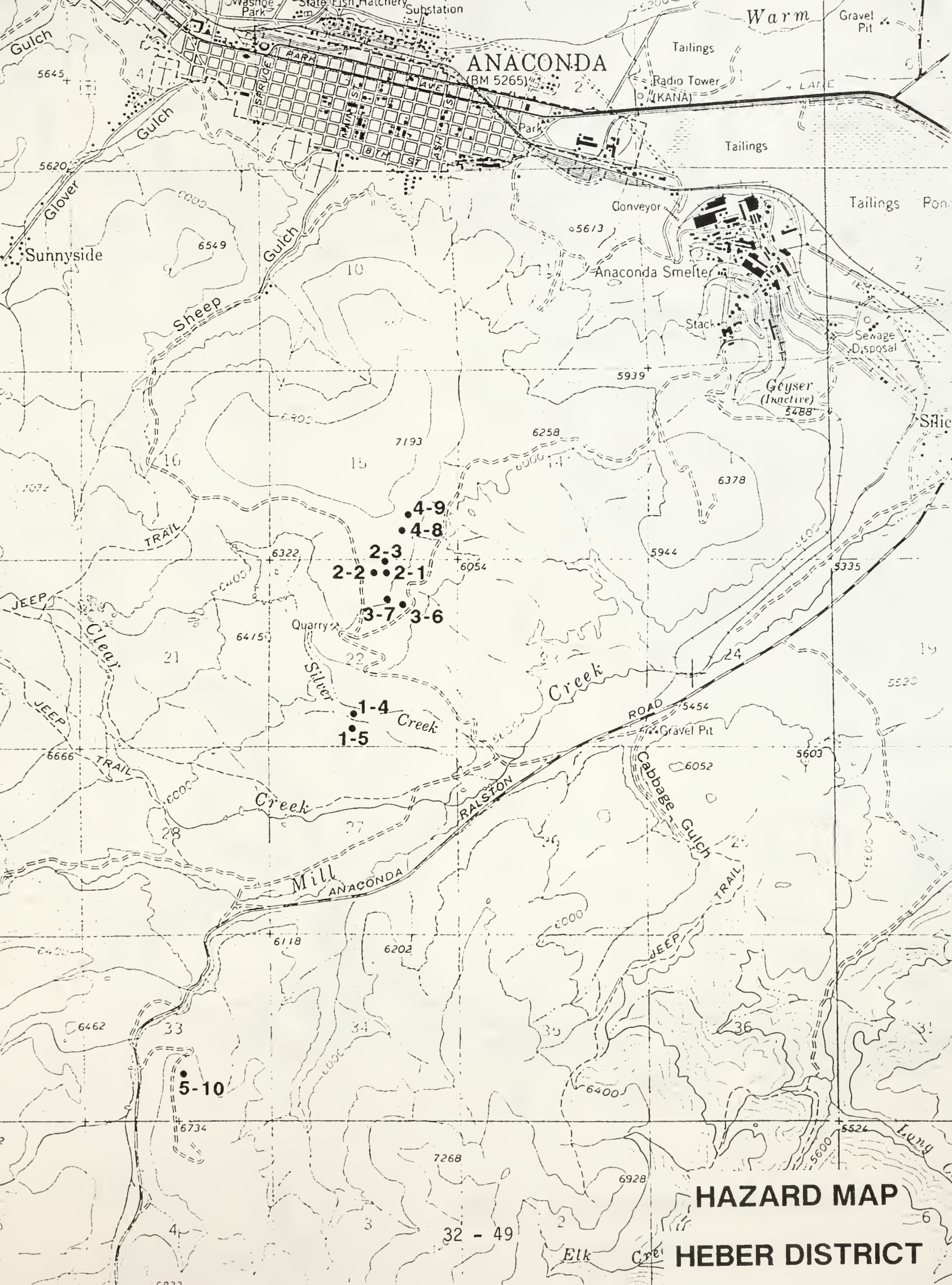
- SITES
- 1 NW SW Section 9
Pleideus
 - 2 Trilby
 - 3 NW NE Section 8
 - 4 Orofino
 - 5



HEBER MINING DISTRICT

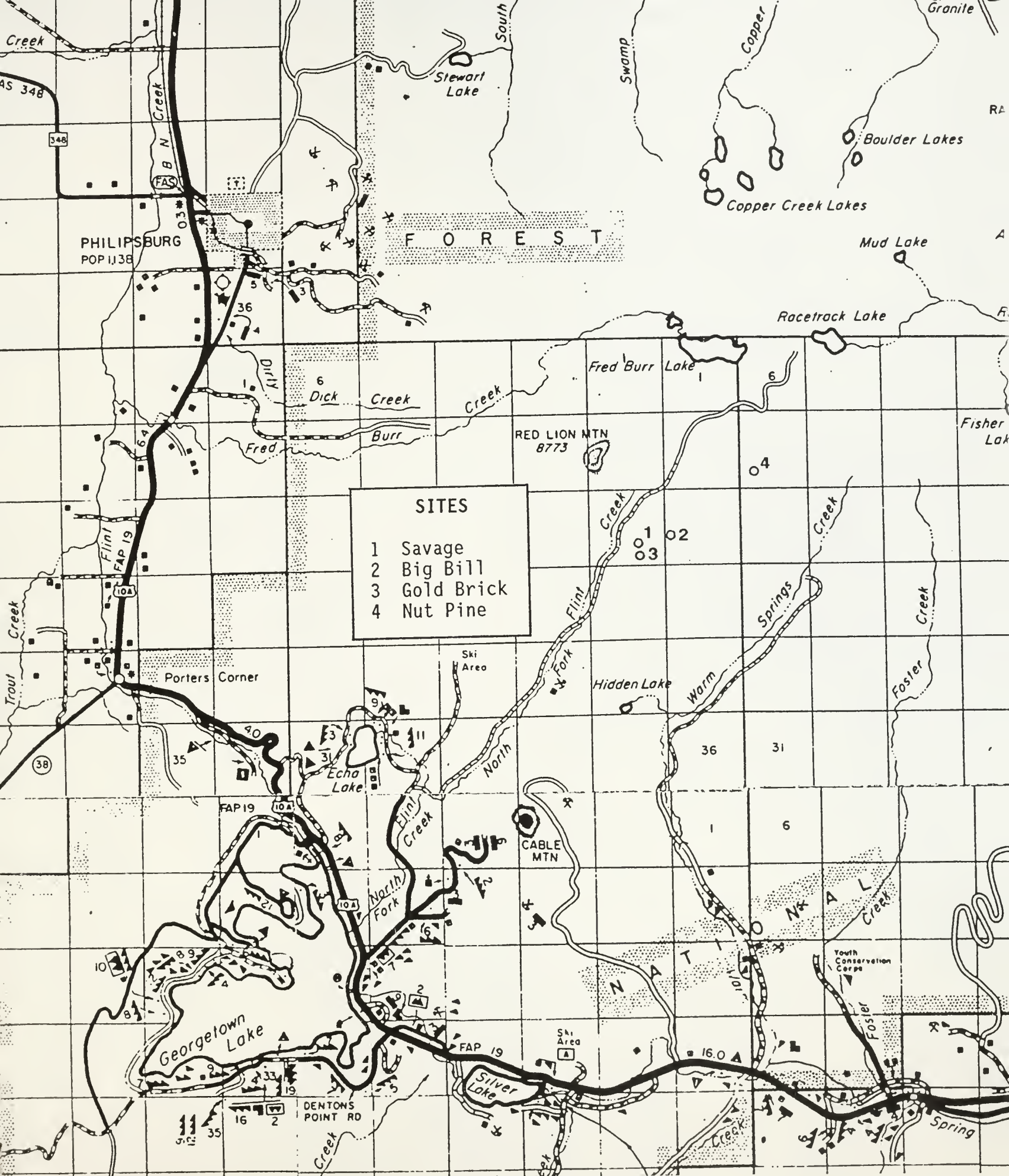
DEER LODGE COUNTY

- SITES**
- 1 Moonlight
 - 2 Alpha
 - 3 Pennsylvania
 - 4 SW SE Section 15
 - 5 SW SE Section 33



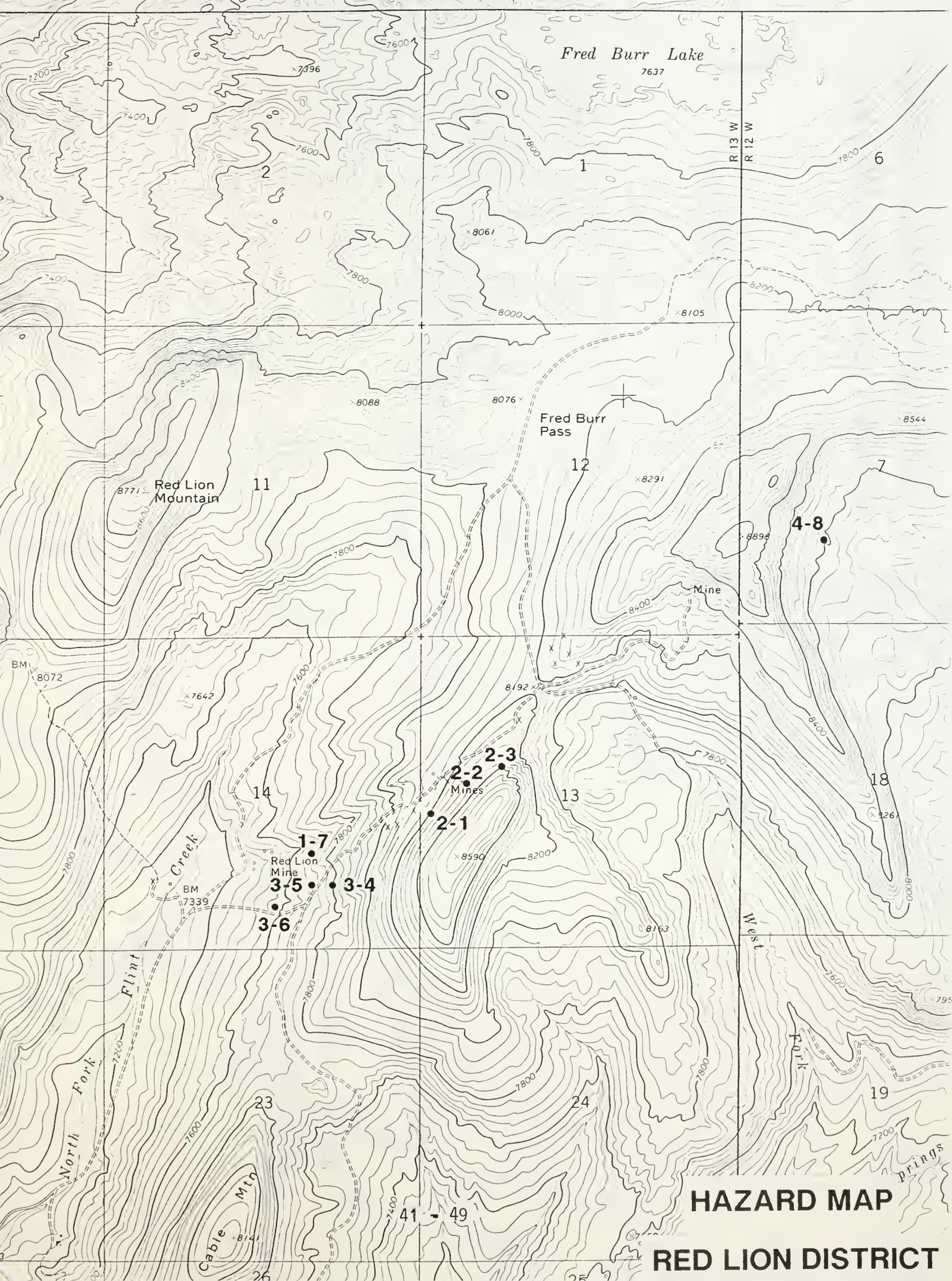
HAZARD MAP

HEBER DISTRICT



RED LION MINING DISTRICT

40 - 49 GRANITE COUNTY



Fred Burr Lake

7637

R 13 W
R 12 W

Fred Burr
Pass

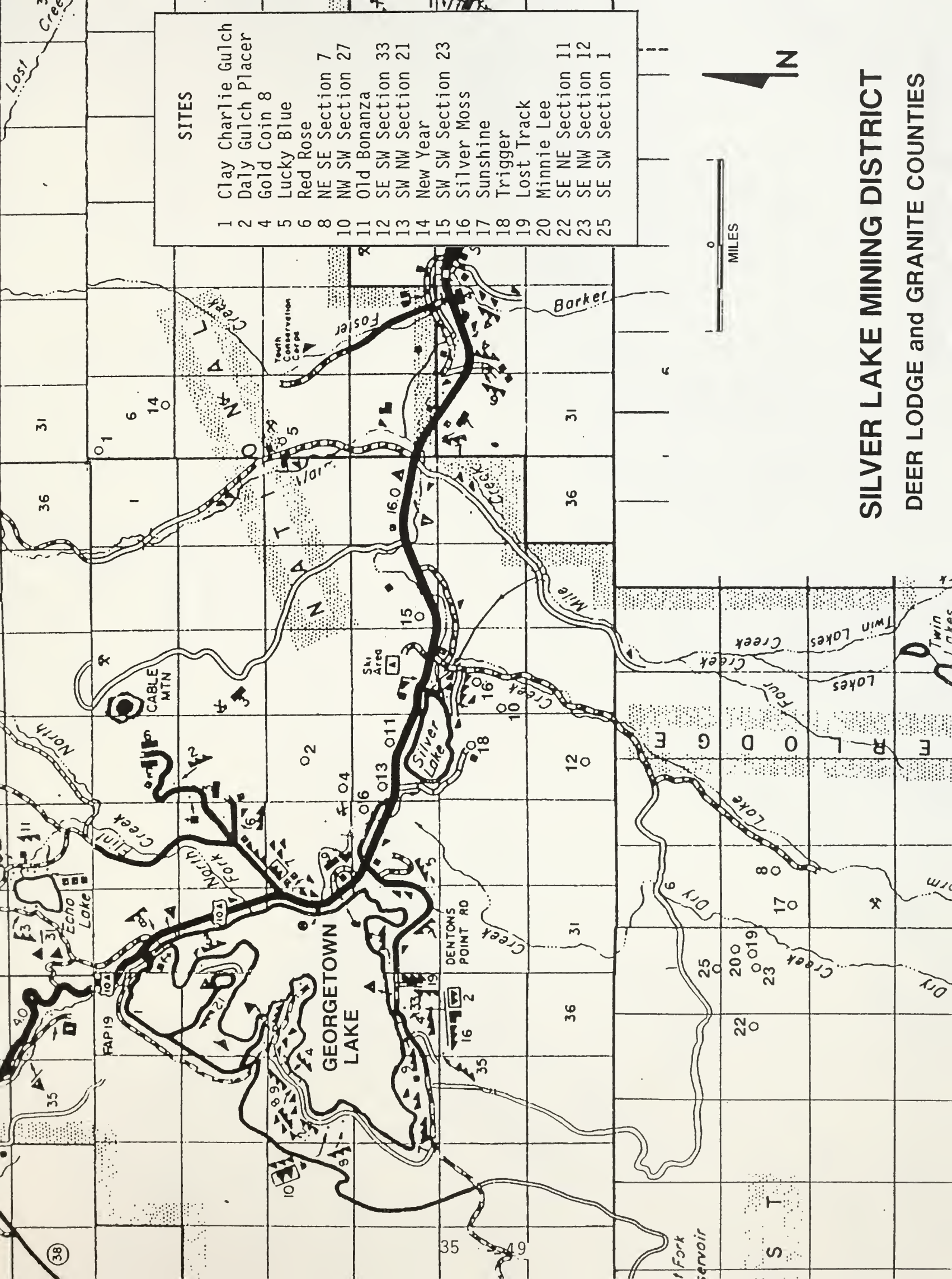
Red Lion
Mountain

Mine

Red Lion
Mine

HAZARD MAP

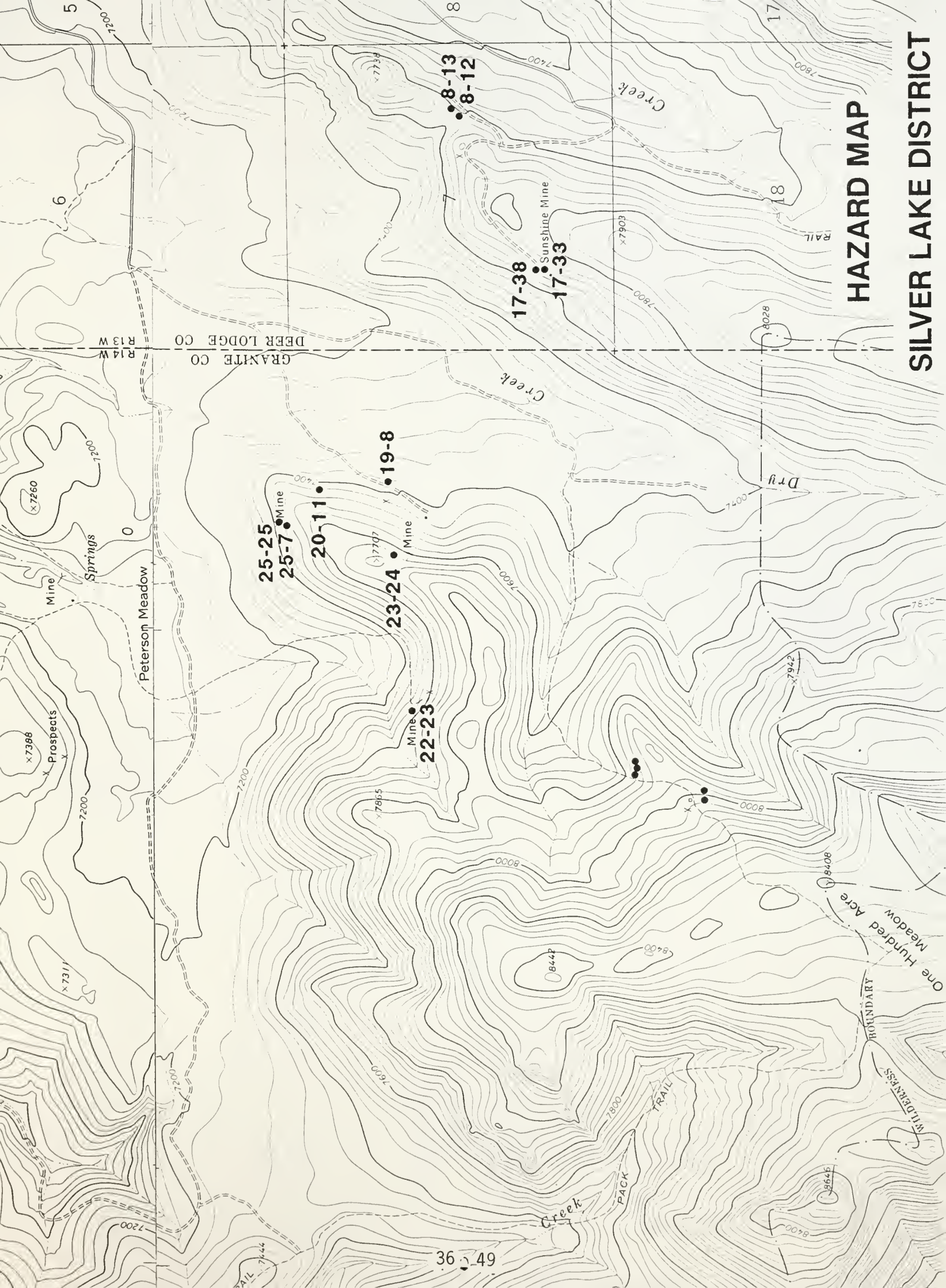
RED LION DISTRICT



SITES

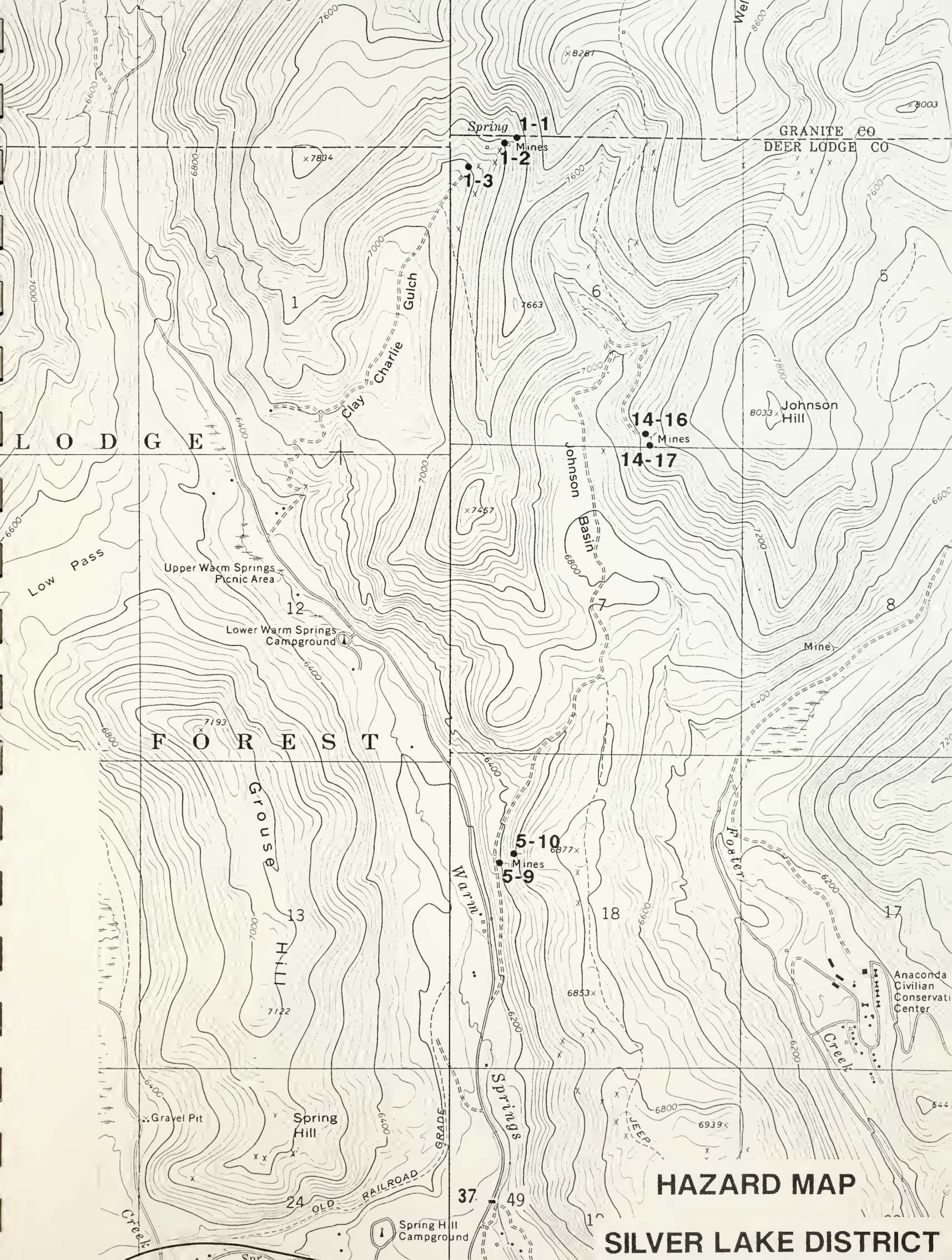
- | | |
|----|--------------------|
| 1 | Clay Charlie Gulch |
| 2 | Daly Gulch Placer |
| 4 | Gold Coin 8 |
| 5 | Lucky Blue |
| 6 | Red Rose |
| 7 | NE SE Section 7 |
| 8 | NW SW Section 27 |
| 10 | Old Bonanza |
| 11 | SE SW Section 33 |
| 12 | SW NW Section 21 |
| 13 | New Year |
| 14 | SW SW Section 23 |
| 15 | Silver Moss |
| 16 | Sunshine |
| 17 | Trigger |
| 18 | Lost Track |
| 19 | Minnie Lee |
| 20 | SE NE Section 11 |
| 22 | SE NW Section 12 |
| 23 | SE SW Section 1 |
| 25 | |

SILVER LAKE MINING DISTRICT
DEER LODGE and GRANITE COUNTIES



HAZARD MAP

SILVER LAKE DISTRICT



GRANITE CO
DEER LODGE CO

DEER LODGE

FOREST

HAZARD MAP

SILVER LAKE DISTRICT

Spring 1-1

Mines 1-2

1-3

14-16

Mines 14-17

5-10

Mines 5-9

Anaconda
Civilian
Conservati
Center

Spring Hill

Spring Hill
Campground

APPENDIX B

BID TABULATIONS

HAZARDOUS MINE OPENING PROJECT
 PHASE 25
 DEERLOUGE AND GRANITE COUNTIES, MONTANA
 MONT A/E 88-146-108
 BID TABULATION RESULTS

BID OPENING: AUGUST 10, 1989

Item No.	Estimated Quantity	Unit	Description	Skinner Enterprises Helena, MT Montana Contractor's License No. 2602A		Swan and Sons Anaconda, MT Montana Contractor's License No. 2732A		Coleman Construction Dillon, MT Montana Contractor's License No. 6231A	
				Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
1.	1.0	LS	Mobilization	L/S	2,000.00	L/S	2,500.00	L/S	500.00
2.	1450	CY	Backfilling Mine Openings	5.00	7,250.00	3.50	5,075.00	10.00	14,500.00
3.	17	EA	Blasting/Collapsing Mine Openings	300.00	5,100.00	350.00	5,950.00	300.00	5,100.00
4.	14	EA	Adit and Shaft Culverts	1,500.00	21,000.00	1,500.00	21,000.00	1,500.00	21,000.00
5.	3	EA	Cable Net Mine Closure	600.00	1,800.00	700.00	2,100.00	400.00	1,200.00
6.	2	EA	Steel Gate Adit Door	1,200.00	2,400.00	1,600.00	3,200.00	1,000.00	2,000.00
7.	10	EA	Steel Gate Systems	2,000.00	20,000.00	1,700.00	17,000.00	2,700.00	27,000.00
8.	60	EA	Attaching Permanent Owner-Provided Signs	25.00	1,500.00	20.00	1,200.00	30.00	1,800.00
9.	3912	LF	Farm Fence (Type F-5)	5.00	19,560.00	6.00	23,472.00	5.00	19,560.00
10.	1.0	LS	Miscellaneous Site Work	L/S	2,500.00	L/S	4,000.00	L/S	1,000.00
TOTAL BASE BID					83,110.00		85,497.00		93,660.00

HAZARDOUS MINE OPENING PROJECT
 PHASE 25
 DEERLOUGE AND GRANITE COUNTIES, MONTANA
 MONT A/E 88-146-108
 BID TABULATION RESULTS

BID OPENING: AUGUST 10, 1989

Item No.	Estimated Quantity	Unit	Description	Scott Construction East Helena, MT Montana Contractor's License No. 7357A			Shardon Construction Helena, MT Montana Contractor's License No. 2353A			Johnson Construction Anaconda, MT Montana Contractor's License No. 6810A		
				Unit	Price	Total Price	Unit	Price	Total Price	Unit	Price	Total Price
1.	1.0	LS	Mobilization	L/S		4,750.00	L/S		15,000.00	L/S		12,000.00
2.	1450	CY	Backfilling Mine Openings		4.95	7,177.50		10.00	14,500.00		10.00	14,500.00
3.	17	EA	Blasting/Collapsing Mine Openings		500.00	8,500.00		450.00	7,650.00		1,000.00	17,000.00
4.	14	EA	Adit and Shaft Culverts		1,600.00	22,400.00		1,450.00	20,300.00		1,500.00	21,000.00
5.	3	EA	Cable Net Mine Closure		1,000.00	3,000.00		750.00	2,250.00		1,500.00	4,500.00
6.	2	EA	Steel Gate Adit Door		2,000.00	4,000.00		1,800.00	3,600.00		1,500.00	3,000.00
7.	10	EA	Steel Grate Systems		2,200.00	22,000.00		1,950.00	19,500.00		1,500.00	15,000.00
8.	60	EA	Attaching Permanent Owner Provided Signs		20.00	1,200.00		48.00	2,880.00		30.00	1,800.00
9.	3912	LF	Farm Fence (Type F-5)		8.00	31,296.00		6.25	24,450.00		6.00	23,472.00
10.	1.0	LS	Miscellaneous Site Work	L/S		3,250.00	L/S		5,000.00	L/S		10,000.00
TOTAL BASE BID						\$107,573.50				\$115,130.00		
										\$122,272.00		

HAZARDOUS MINE OPENING PROJECT
 PHASE 25
 DEERLOUGE AND GRANITE COUNTIES, MONTANA
 MONT A/E 88-146-108
 BID TABULATION RESULTS

BID OPENING: AUGUST 10, 1989

Buck Construction
 Missoula, MT
 Montana Contractor's
 License No. 7355A

Item No.	Estimated Quantity	Unit	Description	Unit Price	Total Price	Unit Price	Total Price
1.	1.0	LS	Mobilization	L/S	17,700.00		
2.	1450	CY	Backfilling Mine Openings	15.00	21,750.00		
3.	17	EA	Blasting/Collapsing Mine Openings	543.00	9,231.00		
4.	14	EA	Adit and Shaft Culverts	1,322.00	18,508.00		
5.	3	EA	Cable Net Mine Closure	1,084.00	3,252.00		
6.	2	EA	Steel Gate Adit Door	1,550.00	3,100.00		
7.	10	EA	Steel Grate Systems	1,190.00	11,900.00		
8.	60	EA	Attaching Permanent Owner-Provided Signs	54.00	3,240.00		
9.	3912	LF	Farm Fence (Type F-5)	7.75	30,318.00		
10.	1.0	LS	Miscellaneous Site Work	L/S	25,000.00		
TOTAL BASE BID					\$143,999.00		

APPENDIX C

KEY RECEIPT ACKNOWLEDGEMENTS

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Blue Eyed Nellie Mining District
Mohawk Site #10-16
T5N R12W S24 NW NW
Deer Lodge County, MT

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Carole J. Payne
Name

6/23/90
Date

[Signature]
Witness

6-23-90
Date

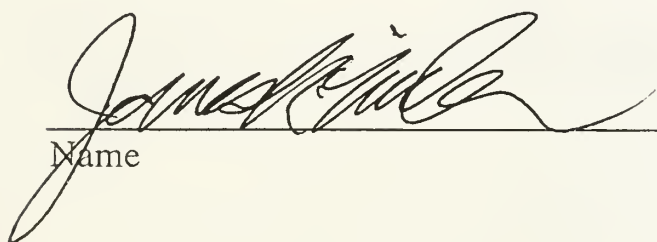
I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Heber Mining District
Alpha Site #2-3
Moonlight Site #1-4
T4N R11W S22 NW NE & SW SE
Deer Lodge County, MT

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.



6/24/90

Name

Date

Witness

Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Silver Lake Mining District
Trigger Group Sites #18-35, #18-36, #18-37
T5N R13W S28 SW NE
Deer Lodge County, MT.

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Virginia Lotengue 2/2/90 Donald Branger 2/2/90
Name Date Witness Date

I hereby acknowledge receipt of the keys to the lock on the access cable net installed at the following Abandoned mine project site:

Silver Lake Mining District

Clay Charlie Guich site #1-2

T5N R12W S6 NW NW

Deer Lodge County, Mt.

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or usability of the underground workings of the site mentioned above. The undersigned understands that entry into the underground mine workings without the provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand and concur with the statements made on this page.

Patricia V. Casthorn 6/19/90

Name

Date

Joe Murphy 6/19/90

Witness

Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Silver Lake Mining District
New Year Site #14-16
T5N R12W S6 SW SE
Deer Lodge County, MT

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Norman Lambey 11/14/89
Name Date Witness Date

for and on behalf of
Ruth N. Thompson,
JTWRO

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Silver Lake Mining District
Old Bonanza Sites #11-18, #11-19, #11-20
T5N R13W S21 NE SE
Deer Lodge County, MT.

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

<u>Mary L McCabe</u>	<u>11-14-89</u>	<u>Joseph D. Bolker</u>	<u></u>
Name	Date	Witness	Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Silver Lake Mining District
Minnie Lee Site #20-11
Sec.12 #23-24
T4N R14W S12
Deer Lodge County, MT.

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

<u>Ronald O. Eccleston</u>	<u>11/15/89</u>	<u>Roe Eccleston</u>	<u>11/15/89</u>
Name	Date	Witness	Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Silver Lake Mining District
Trigger Group Sites #18-35, #18-36, #18-37
T5N R13W S28 SW NE
Deer Lodge County, MT

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Robert S. McKay
Name

Date

11-11-89
Witness Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Red Lion Mining District
Big Bill Site #2-1
T6N R13W S13 NW SW
Granite County, MT.

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

William A. Flynn 11/10/89
Name Date

William A. Flynn 11/10/89
Witness Date

I hereby acknowledge receipt of the keys to the locks on the access culverts, cable nets, adit doors/gates or grates installed at the following abandoned mine project sites:

Red Lion Mining District
Nut Pine Site #4-8
T6N R13W S14 NW SE
Granite County, MT

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Fred M. Suel 11/10/89 Margaret J. Peterson 11/10/89
Name Date Witness Date

NOTARY PUBLIC for the State of Montana
RESIDING at Butte
My Commission Expires July 12, 1991...

APPENDIX D

CHANGE ORDERS

2.12 CHANGE ORDER

Order No. 1Date: November 1, 1989Agreement Date: August 30, 1989NAME OF PROJECT: Hazardous Mine Opening Project 25, Deer Lodge and Granite
Counties, Mont A/E 89-46-108OWNER: Montana Department of State LandsCONTRACTOR: Skinner Enterprises

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL UNIT	TOTAL COST
		MATERIALS	LABOR	EQUIPMENT	MISCELLANEOUS			
	See attached sheet							
TOTAL COST - MATERIALS, LABOR, EQUIPMENT, AND MISCELLANEOUS								
OVERHEAD & PROFIT @ <u>included</u> %								
GRAND TOTAL - THIS CHANGE ORDER								<u>(\$5,564.10)</u>

Original Contract Price	<u>\$83,110.00</u>
Current Contract Price Adjusted by Previous Order	<u>N/A</u>
Cost This Change Order (+ or -)	<u>(5,564.10)</u>
New Contract Price Including This Change Order	<u>\$77,545.90</u>

The completion date as set forth in the Contract Documents shall be (unchanged, increased, decreased) by _____ calendar days.

The date for completion of all work will be December 29, 1989

Description and Justification for Change:

1. Silver Lake/Sec. 27 sites #10-14 and #10-15, Silver Lake/Sec. 1 site #25-7 and Silver Lake/Lucky Blue sites #5-9 and #5-10. All sites were inaccessible with equipment.
2. Blue Eyed Nellie/Sheridan #12-48, Blue Eyed Nellie/Mtn View - Surprise #12-36 and Silver Lake/Spring Hill #12-56 deleted due to directives issued by new owners or lessees.
3. Red Lion/Nut Pine site #4-8, a 12' x 16' steel grate will be manufactured on-site and installed in lieu of a cable net, as originally specified. This substitution requested due to poor rock quality at the opening entrance, resulting in ineffective rock bolt placement. Difficult access to the site precludes the use of a prefabricated grate.
4. Silver Lake/Sunshine site #17-33. Additional materials and labor requested to alter prefabricated 16' x 16' grate to fit mine opening.
5. Silver Lake/Trigger site #18-37, existing adit door was not secured to adit opening. Adit culvert was installed in lieu of installing lockbox and padlock to existing door.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agrees that on or after execution of this consent, the penalty of the applicable Performance Bond or Bonds is hereby increased by (\$_____) (100% of the Change Order amount) and the penalty of the application Payment Bond or Bonds is hereby increased by (\$_____) (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA
RESIDENT AGENT

SURETY

By: _____

(Seal)

Recommended by: Jeremiah B. Bowser, Engineer

Accepted by: Andy Skinner, Contractor

Approved by: Larry Marshall, Owner

CHANGE ORDER NO. 1
PHASE 25

ITEM NO.	DISTRICT/SITE	B.O.#	DESCRIPTION	AMOUNT
2	Silver Lake/Sec. 27	#10-14	Delete 45.3 c.y. Backfill Add Blast	\$ (226.50) 300.00
		#10-15	Delete 15.5 c.y. Backfill Add Blast	(77.50) 300.00
	Silver Lake/Sec. 1	#25-7	Delete 14.8 c.y. Backfill Add Blast	(74.00) 300.00
	Silver Lake/Lucky Blue	#5-9	Delete 27.8 c.y. Backfill Add Blast	(139.00) 300.00
		#5-10	Delete 27.6 c.y. Backfill Add Blast	(138.00) 300.00
3	Blue Eyed Nellie/Sheridan	#12-48	Delete Blast Delete Blast	(300.00) (300.00)
4	Blue Eyed Nellie/ Mtn View-Surprise	#12-36	Delete 2 culverts	(3,000.00)
	Silver Lake/Spring Hill	#12-56	Delete 2 culverts	(3,000.00)
	Silver Lake/Trigger	#18-37	Delete lock Add culvert	(100.00)- 1,500.00
5	Red Lion/Nut Pine	#4-8	Delete Cable Net Add sp. grate (fabrication) Add sp. grate (installation)	(600.00)-? 1,101.70 2,000.00-
7	Blue Eyed Nellie/ Mtn View Surprise	#12-36	Delete Grate ? Delete Grate	(2,000.00) (2,000.00)
	Silver Lake/Sunshine	#17-33	Add sp. Grate (Fabrication)	<u>289.20</u>
TOTAL NET CHANGE				(\$5,564.10)

2.12 CHANGE ORDER

Order No. 2
 Date: July 20, 1990
 Agreement Date: August 30, 1989

NAME OF PROJECT: Hazardous Mine Opening Project 25, Deer Lodge and Granite Counties,
Mont A/E 89-46-108

OWNER: Montana Department of State Lands

CONTRACTOR: Skinner Enterprises

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

COST OF CHANGES							
ITEM NO.	DESCRIPTION OF CHANGES ESTIMATED QUANTITIES & UNITS	MATERIALS	LABOR	EQUIPMENT	MISCELLANEOUS	TOTAL UNIT COST	TOTAL COST
	See attached sheet						
TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISCELLANEOUS							
OVERHEAD & PROFIT @ <u>included</u> %							
GRAND TOTAL - THIS CHANGER ORDER							<u>(\$2,925.30)</u>

Original Contract Price	<u>\$83,110.00</u>
Current Contract Price Adjusted by Previous Order	<u>(5,564.10)</u>
Cost This Change Order (+ or -)	<u>(2,925.30)</u>
New Contract Price Including This Change Order	<u>\$74,620.60</u>

The completion date as set forth in the Contract Documents shall be (unchanged, increased, decrease) by _____ calendar days.

The date for completion of all work will be August 5, 1990.

Description and Justification for Change:

1. Blue Eyed Nellie/Sec. 14 - #13-27 - Natural abatement. Material sloughed to naturally eliminate hazard. #13-28 - Lack of equipment access. #13-31 - Lack of equipment access, steep, rocky terrain.
2. Blue Eyed Nellie/Sheridan #19-49 - Site was accessed with equipment and backfilled.
3. Blue Eyed Nellie/Foster Gulch #4-5 - Natural abatement eliminated hazard.
4. Blue Eyed Nellie/Buck Gulch #3-2 & #3-3 - Lack of equipment access. Steep, rocky terrain.
5. Silver Lake District/Lost Track #19-8 - Fractured, unstable rock at adit entrance. Unsafe working conditions.
6. Silver Lake District/Clay Charlie Gulch #1-3 - Lack of equipment access.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agrees that on or after execution of this consent, the penalty of the applicable Performance Bond or Bonds is hereby increased by _____ (\$ _____) (100% of the Change Order amount) and the penalty of the application Payment Bond or Bonds is hereby increased by _____ (\$ _____) (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA
RESIDENT AGENT

SURETY

By: _____
(Seal)

Recommended by: Jeremiah B. Brouse
Engineer

Accepted by: Archie Kinner
Contractor

Approved by: Larry Marshall
Owner

CHANGE ORDER NO. 2
HMO - PHASE 25

ITEM NO.	DISTRICT/SITE	B.O.#	DESCRIPTION	AMOUNT
1	Blue Eyed Nellie/Sec. 14	#13-27	Delete Culvert	(1,500.00)
		#13-28	Delete Culvert	(1,500.00)
			Add 123 L.F. Fence	615.00
			Add 1 Hazard Sign	25.00
		#13-31	Delete grate	(2,000.00)
			Add 184 L.F. Fence	920.00
			Add 1 Hazard Sign	25.00
2	Blue Eyed Nellie/Sheridan	#19-49	Delete Blast	(300.00)
			Add backfill (5 yds ³)	25.00✓
3	Blue Eyed Nellie/Foster Gulch	#4-5	Delete Blast	(300.00)
4	Blue Eyed Nellie/Buck Gulch	#3-2	Delete Backfill (1.1 yds ³)	(5.50)
			Add Blast	300.00
		#3-3	Delete Backfill (16.6 yds ³)	(83.30)
			Add Blast	300.00
5	Silver Lake District/Lost Track	#19-8	Delete Adit Gate	(1,200.00)
			Add culvert	1,500.00
6	Silver Lake District/Clay Charlie Gulch	#1-3	Delete Backfill (9.3 yds ³)	(46.50)
			Add Blast	<u>300.00</u>
			NET CHANGE	(\$2,925.30)

APPENDIX E

**APPROVED PAYMENT CERTIFICATES OF SUBSTANTIAL COMPLETION REQUESTS,
AND AFFIDAVIT ON BEHALF OF CONTRACTOR**

PAY REQUEST NO.1

FROM: August 30, 1989

TO: October 6, 1989

PROJECT NAME: Hazardous Mine Opening Project - Phase 25, Project 25

LOCATION: Deerlodge and Granite
Counties, Montana

PROJECT NO.: Mont A/E 89-46-108

NAME OF CONTRACTOR: Skinner Enterprises, Inc. ADDRESS: P.O. Box 5447
Helena, MT 59635

SUMMARY OR PROJECT STATUS

Amount of Original Contract	\$ 83,110.00
Amount of Approved Work Directive(s)	-0-
Amount of Approved Change Order(s)	-0-
TOTAL CONTRACT AMOUNT	\$ 83,110.00
Contract Time Used to Date	38 Days
Percentage of Contract Time Used	31.7%
Percentage of Contract Amount Earned	30.1%

Original Contract Amount Completed	\$ 25,021.50
Work Directive(s) Amount Completed	-0-
TOTAL To Date	25,021.50
Times 90% = 22,519.35	
TOTAL AMOUNT Earned To Date	22,519.35
Less Previous Amount Earned	-0-
Amount Payable This Period	22,519.35
Less 1% Gross Receipts Tax	225.19
TOTAL DUE CONTRACTOR THIS PERIOD	22,294.16

Requested By: Skinner Enterprises Jason Skinner Date: 10-20-89
(Contractor)

Checked By: Chen-Northern, Inc. Jeremiah B. Brown Date: 10/16/89
(Engineer)

Approved By: Department of State Lands Lang Marshall Date: 10/30/89
Abandoned Mine Reclamation Bureau (Owner)

CHEN-NORTHERN, INC.

MONT A/E 89-46-108

ITEM NO.	DESCRIPTION	ESTIMATED PLAN QUANTITY	UNIT BID PRICE	UNITS OF	UNITS OF	MATERIALS ON SITE	LESS MATERIALS INSTALLED	TOTAL COST OF COMPLETED WORK
				COMPLETED THIS REQUEST	COMPLETED TO DATE			
1	Mobilization	1.0 LS	2,000.00	1	1	-0-	-0-	\$ 2,000.00
2	Backfilling Mine Openings	1450	5.00	1,004.3	1,004.3	-0-	-0-	5,021.50
3	Blasting/Collapsing Openings	17	300.00	-0-	-0-	-0-	-0-	-0-
4	Adit and Shaft Culverts	14	1,500.00	8	8	-0-	-0-	12,000.00
5	Cable Net Mine Closure	3	600.00	-0-	-0-	-0-	-0-	-0-
6	Steel Gate Adit Doors	2	1,200.00	-0-	-0-	-0-	-0-	-0-
7	Steel Gate Systems	10	2,000.00	3	3	-0-	-0-	6,000.00
8	Attaching Owner-Provided Signs	60	25.00	-0-	-0	-0-	-0-	-0-
9	Farm Fence (Type F-5)	3912	5.00	-0-	-0-	-0-	-0-	-0-
10	Miscellaneous Site Work	1.0 LS	2,500.00	-0-	-0-	-0-	-0-	-0-
TOTAL								25,021.50

Chen-Northern

PAY REQUEST NO.2

FROM: October 7, 1989

TO: November 7, 1989

PROJECT NAME: Hazardous Mine Opening Project - Phase 25, Project 25

LOCATION: Deerlodge and Granite
Counties, Montana

PROJECT NO.: Mont A/E 89-46-108

NAME OF CONTRACTOR: Skinner Enterprises, Inc. ADDRESS: P.O. Box 5447
Helena, MT 59635

SUMMARY OR PROJECT STATUS

Amount of Original Contract	\$ 83,110.00
Amount of Approved Work Directive(s)	-0-
Amount of Approved Change Order(s)	(5,564.10)
TOTAL CONTRACT AMOUNT	\$ 77,545.90
Contract Time Used to Date	61 Days
Percentage of Contract Time Used	51%
Percentage of Contract Amount Earned	65%

Original Contract Amount Completed	\$ 43,928.00
Change Order(s) Amount Completed	6,390.90
TOTAL To Date	50,318.90
Times 90% =	45,287.01
TOTAL AMOUNT Earned To Date	45,287.01
Less Previous Amount Earned	22,519.35
Amount Payable This Period	22,767.66
Less 1% Gross Receipts Tax	227.68
TOTAL DUE CONTRACTOR THIS PERIOD	22,539.98

Requested By: Skinner Enterprises Gusta Skinner Date: 12-14-89
(Contractor)

Checked By: Chen-Northern, Inc. Jeremiah B. Bourse Date: 11/30/89
(Engineer)

Approved By: Department of State Lands Raymond Date: 12/22/89
Abandoned Mine Reclamation Bureau (Owner)

PAY REQUEST NO. 3

FROM: April 23, 1990

TO: June 19, 1990

PROJECT NAME: Hazardous Mine Opening Project - Phase 25, Project 25

LOCATION: Deerlodge and Granite
Counties, Montana

PROJECT NO: Mont A/E 89-46-108

NAME OF CONTRACTOR: Skinner Enterprises, Inc. ADDRESS: P.O. Box 5447
Helena, MT 59635

SUMMARY OF PROJECT STATUS

Amount of Original Contract	\$83,110.00
Amount of Approved Work Directive(s)	0
Amount of Approved Change Order(s)	(8,489.40)
TOTAL CONTRACT AMOUNT	74,620.60
Contract Time Used to Date	106 days
Percentage of Contract Time Used	88.3%
Percentage of Contract Amount Earned	118.1%

Original Contract Amount Completed	\$59,680.50
Change Order(s) Amount Completed	28,450.90
TOTAL To Date	88,131.40
Times 90% + 79,318.26	
TOTAL AMOUNT Earned To Date	79,318.26
Less Previous Amount Earned	45,287.01
Amount Payable This Period	34,031.25
Less 1% Gross Receipts Tax	340.31
TOTAL DUE CONTRACTOR THIS PERIOD	33,690.94

Requested By: Skinner Enterprises *Andy Skinner* Date: 7-30-90
(Contractor)

Checked By: Chen-Northern, Inc. *Jeremiah B. Bowers* Date: 7/27/90
(Engineer)

Approved By: Department of State Lands *Fanny Maubell* Date: 8/1/90
Abandoned Mine Reclamation Bureau (Owner)

PAY REQUEST NO. 3

APPROVED CHANGE ORDERS

PROJECT: Hazardous Mine Opening Project
Project 25, Phase 25

MONTANA/E: 89-46-108

ITEMIZATION OF QUANTITIES AND COSTS

ITEM NO.	DESCRIPTION	UNIT BID PRICE	AMOUNT THIS REQUEST	AMOUNT TO DATE	TOTAL COST
2	Backfill	5.00	5	5	25.00
3	Blasting/Collapsing Mine Openings	300.00			
	Change Order #1			5	1500.00
	Change Order #2		3	3	900.00
4	Adit & Shaft Culverts	1500.00			
	Change Order #1			1	1500.00
	Change Order #2		1	1	1500.00
5	Cable Net Mine Closure	600.00			
6	Steel Gate Adit Door	1200.00			
7	Steel Grate Systems	2000.00			
	Change Order #1			1	2000.00
	Change Order #1	Fabrication		1	1101.70
	Change Order #1	Fabrication			289.20
8	Attaching Owner Provided Signs	25.00			
	Change Order #2		10	10	250.00
9	Farm Fence	5.00			
	Change Order #2		3877	3877	19,385.00
10	Miscellaneous Site Work	25.00	0	0	0
	TOTAL				28,450.90

PAYMENT REQUEST NO. 4

FROM July 23, 1990 TO August 2, 1990

PROJECT TITLE: Hazardous Mine Opening Project - Phase 25, Project 25

LOCATION: Deerlodge & Granite Counties, Montana MONT A/E or DSL/AMRB: A/E 89-46-108

NAME OF CONTRACTOR: Skinner Enterprises, Inc.

ADDRESS: P.O. Box 5447, Helena, MT 59604

CHANGE ORDERS			CONTRACT STATUS			
No.	Description	Amount	Total Amount	Completed Amount	Uncompleted Amount	Percent Complete
1		<5,564.10>	99,997.90	99,997.90	0	100%
2		<2,925.00>				
3		25,377.00				
TOTAL CHANGE ORDERS		16,887.90				
CONTRACT TO DATE INCLUDING CHANGE ORDERS \$99,997.90			COMPLETED TO DATE \$99,997.90			
*For use only when securities are on deposit in lieu of retainage.			PLUS MATERIALS ON SITE \$ 0			
TOTAL RETAINAGE \$			TOTAL COMPLETED TO DATE \$99,997.90			
SECURITIES ON DEPOSIT \$			LESS RETAINAGE (Final Payment) \$ N/A			
ADJUSTED RETAINAGE \$			TOTAL AMOUNT EARNED TO DATE \$99,997.90			
			LESS PREVIOUS PAYMENTS \$79,318.26			
			AMOUNT DUE THIS PAYMENT \$20,679.64			
			LESS 1% TAX \$ 206.79			
			TOTAL DUE CONTRACT \$20,472.85			

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

SKINNER ENTERPRISES
Contractor

BY: Sharon Skinner

DATE: 11-20-90

RECOMMENDED BY:

Chen-Northern, Inc.
Engineer

By: Jeremiah R. Boyce

Date: 11/22/90

DSL-AMRB

Owner

BY: James Marshall

DATE: 11/30/90

ITEMIZATION OF QUANTITIES AND COSTS						
Item	Description	Estimated Plan Quantity	Unit Price Bid	Units of Work Completed To Date	Total Cost of Complete Work	Percent Complete
1	Mobilization	1.0 L.S.	2,000.00	1.0	\$2,000.00	100%
2	Backfill Mine Openings	1450 C.Y.	5.00	2350.4	\$11,752.00	100%
3	Blasting/Collapsing Openings	17 ea	300.00	21	\$6,300.00	100%
4	Adit & Shaft Culverts	14 ea	1,500.00	10	\$15,000.00	100%
5	Cable Net Mine Closure	3 ea	600.00	3	\$1,800.00	100%
4	Steel Gate Adit Doors	2 ea	1,200.00	1	\$1,200.00	100%
7	Steel Grate Systems	10 ea	2,000.00	8	\$16,000.00	100%
7A	Fabricating Steel Grates				1,390.90	100%
8	Attaching Owner Provided Signs	60 ea	25.00	72	\$1,800.00	100%
9	Farm Fence (Type P-S)	3912 L.F.	5.00	8051	\$40,255.00	100%
10	Miscellaneous Site Work	1.0 L.S.	2,500.00	1.0	\$2,500.00	100%
TOTAL					\$99,997.90	100%

\$99,997.90

100%

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: Montana Department of State Lands OWNER

PROJECT TITLE: Hazardous Mine Opening Project, Phase 25, Project 25

MONT A/E OR DSL-AMRB: 89-46-108

CONTRACT DATE: August 21, 1989

LOCATION: Deerlodge and Granite Counties,
Montana

PROJECT OR PART SHALL INCLUDE: _____

CONTRACTOR: Skinner Enterprises

ADDRESS: P.O. Box 5447

Helena, MT 59604

TELEPHONE NO: 442-6931

SUBSTANTIAL COMPLETION DATE: 8-1-90

DSL INSPECTION DATE: 8-7-90

ENGINEER: Chen-Northern, Inc.

Jeremiah B. Bowser, P.E.

PERFORMANCE BOND NO.: 2630957

DATE OF BOND: 8-23-89

SURETY: Continental Casualty Co., Chicago, IL

MONTANA AGENT: Sally C. Dundas

Insure West, Inc.

ADDRESS: P.O. Box 6169, Helena, MT 59604

443-1147

The Work performed under this Contract has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be substantially completed on the above date.

The date of substantial completion of a project or specified area of a project is the data when the construction is sufficiently completed, in accordance with the contract documents, as modified by any change orders agreed to by the parties, so the Owner can occupy or utilize the project or specified area of the project for the use for which it was intended.

A tentative list of items to be completed is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents.

ENGINEER:

Chen-Northern, Inc.

By Jeremiah B. Bowser 8/20/90
Authorized Representative Date

The Contractor accepts the above Certificate of Substantial Completion and agrees to complete and correct the items on the tentative list within the time indicated.

CONTRACTOR

SKINNER ENTERPRISES

By L. Andy Skinner 8-15-90
Authorized Representative Date

The Owner accepts the Project or specified area of the Project as substantially complete and will assume full possession of the project or specified area at _____ (time), on _____ (date). The responsibility for heat, utilities, security, and insurance under the Contract Documents shall be as set forth under "Remarks" below.

OWNER:

ECF

By Larry Marshall 10/15/90
Authorized Representative Date

Remarks (Attach additional sheet, if necessary)

Appendix A
Items to be Completed
Phase 25, Project 25
A/E 89-46-108

1. Contractor will provide written verification regarding final disposition of mine ore car removed from Magellan Resources, Inc. (P.O. Box 2005 Philipsburg, Montana 59858) property on or about September 26, 1989. Copies of all correspondence, payments, agreements etc. concerning the incident must be submitted. This item shall be resolved by September 14, 1990.

SECTION II

2.13 AFFIDAVIT ON BEHALF OF CONTRACTOR

STATE OF Montana
COUNTY OF Lewis & Clark
DATE December 5, 1990

MONT A/E 89-46-108

I certify to the best of my knowledge and belief that all work has been performed and materials supplied in strict conformance with the terms and conditions of the corresponding contract documents between Department of State Lands, the Owner, and Skinner Enterprises, the Contractor, dated August 25, 1989 for the Hazardous Mine Opening Project, Phase 25, Granite & Deer Lodge Counties (Project)

and further declare that all bills for materials, supplies, utilities, and for all other things furnished or caused to be furnished by the above-named Contractor and used in the execution of the above Contract have been fully paid, and there are no unpaid claims or demands of State Agencies, subcontractors, materialmen, mechanics, laborers or any others resulting from or arising out of work done or ordered to be done by said Contractor under the above-identified Contract.

In consideration of the prior and final payments made and all payments made for authorized changes, the Contractor releases and forever discharges the Owner from any and all obligations and liabilities arising by virtue of said Contract and authorized changes between the parties hereto, either verbal or in writing, and any and all claims and demands of every kind and character whatsoever against the Owner, arising out of or in any way relating to said Contract, and authorized changes.

This statement is made for the purpose of inducing the Owner to make Final Payment under the terms of the Contract, relying on the truth and statements contained therein.

Dated this 5th day of December, 1990, at Helena, Montana.

CONTRACTOR:

Skinner Enterprises

By *J. Skinner*

Subscribed and sworn to before me this 5th day of December, 1990.

(Notary Seal)
Notary Public for the State of Montana
Residing at Helena, MT
My commission expires 10-4-91

APPENDIX F

QUANTITIES AND COSTS

QUANTITIES AND COSTS

[illegible]

**HAZARDOUS MINE OPENING PROJECT 25
BLUE EYED NELLIE MINING DISTRICT
QUANTITIES AND COSTS**

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
Blue Eyed Nellie	2-1	Fence	Fence		167	2	885.00
Buck Gulch	3-2	Backfill	Blast				300.00
	3-3	Backfill	Blast				300.00
Foster Creek	4-4	Blast	Blast				300.00
	4-5	Blast	-				
	4-4	Blast	Blast				300.00
Gladstone	17-7	Fence	Fence		321	1	1630.00
	17-8	Fence	Fence		135	1	700.00
Homestake	7-9	Fence	Fence		136	1	705.00
	7-10	Fence	Fence		178	2	940.00
Keystone	6-11 thru 6-14	Fence	Fence		403	3	2090.00
	6-15	Fence	Fence		124	2	780.00
Mohawk	10-16	Adit Gate	Adit Gate				1200.00
Mountain View	12-17	Fence	Fence		236	2	1230.00
	12-18	Fence	Fence		131	1	680.00
NW NE Section 2	8-23	Backfill	Backfill	417.6			2088.00
	8-24	Backfill	Backfill	31.3			156.50
NW NW Section 2	9-25	Fence	Fence		161	1	830.00
NW NW Section 25	11-26	Fence	Fence		914	5	4695.00
SE NE Section 14	13-28	Culvert	Fence		123	1	640.00
	13-29	Fence	Fence		159	1	780.00
	13-30	Fence	Fence		184	1	945.00
	13-31	Grate	Fence		184	1	945.00
	13-32	Fence	Fence		159	1	820.00
	13-33	Fence	Fence		141	2	755.00
SE NW Section 26	14-34	Blast	Blast				300.00

HAZARDOUS MINE OPENING PROJECT 25
BLUE EYED NELLIE MINING DISTRICT - Page 2
QUANTITIES AND COSTS

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
SE NW Section 9	5-35	Fence	Fence		140	1	725.00
	5-36	Fence	Fence		149	1	770.00
	5-37	Blast	Blast				300.00
SE SW Section 22	15-38	Blast	Blast				300.00
	15-39	Blast	Blast				300.00
	15-40	Blast	Blast				300.00
	15-41	Blast	Blast				300.00
	19-48	Blast	Blast				300.00
SW NW Section 10	16-43	Backfill	Backfill	148.1			740.50
SW SW Section 21	18-44	Blast	Blast				300.00
	18-45	Blast	Blast				300.00
	18-46	Blast	Blast				300.00
Sheridan	19-47	Backfill	Backfill	148			740.00
	19-48	Backfill	Backfill	188.8			944.00
	19-49	Backfill	Backfill	5			25.00
Mobilization							835.06
Misc. Site Work							1043.66
TOTAL				938.8	4159	30	33,517.72

**HAZARDOUS MINE OPENING PROJECT 25
GEORGETOWN MINING DISTRICT
QUANTITIES AND COSTS**

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
NW NE Section 8	4-1	Backfill	Backfill	28			140.00
NW SW Section 9	1-2	Culvert	Culvert				1500.00
Orofino	5-7	Fence	Fence		130	2	700.00
	5-8	Backfill	Backfill	271.3			1356.50
Pleideus	2-3	Grate	16'x 16' Grate				1044.38 (Fabrication) 2000.00 (Installation)
Trilby	3-4	Culvert	Culvert				1500.00
	3-5	Fence	-				
	3-6	Culvert	Culvert				1500.00
Mobilization							135.94
Misc. Site Work							169.94
TOTAL				299.3	130	2	10,046.76

**HAZARDOUS MINE OPENING PROJECT 25
HEBER MINING DISTRICT
QUANTITIES AND COSTS**

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
Alpha	2-1	Backfill	Backfill	140			700.00
	2-2	Backfill	Backfill	60			300.00
	2-3	Grate	16'x 16' Grate				1044.38 (Fabrication) 2000.00 (Installation)
Moonlight	1-4	Cable Net	Cable Net				600.00
	1-5	Fence	Fence		171	2	905.00
Pennsylvania	3-6 & 3-7	Fence	Fence		270	2	1400.00
SW SE Section 15	4-8 & 4-9	Fence	Fence		150	2	800.00
SW SE Section 33	5-10	Backfill	Backfill	150			750.00
Mobilization							194.10
Misc. Site Work							242.74
TOTAL				350	591	6	8936.22

**HAZARDOUS MINE OPENING PROJECT 25
SILVER LAKE MINING DISTRICT
QUANTITIES AND COSTS**

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
Clay Charlie Gulch	1-1	Fence	Fence		101	1	530.00
	1-2	Cable Net	Cable Net				600.00
	1-3	Backfill	Blast				300.00
Daly Gulch	2-5	Backfill	Backfill	44.4			222.00
Gold Coin #8	4-6	Grate	16'x 16' Grate				1044.38 (Fabrication) 2000.00 (Installation)
Lost Track	19-8	Adit Gate	Culvert				1500.00
Lucky Blue	5-9	Backfill	Blast				300.00
	5-10	Backfill	Blast				300.00
Minnie Lee	20-11	Culvert	Culvert				1500.00
NE SE Section 7	8-12	Fence	Fence		122	1	635.00
	8-13	Fence	Fence		99	2	545.00
NW SW Section 27	10-14	Backfill	Blast				300.00
	10-15	Backfill	Blast				300.00
New Year	14-16	Grate	16'x 16' Grate				1044.38 (Fabrication) 2000.00 (Installation)
	14-17	Fence	Fence		660	3	3375.00
Old Bonanza	11-19	Culvert	Culvert				1500.00
	11-19	Culvert	Culvert				1500.00
	11-21	Culvert	Culvert				1500.00
	11-21	Fence	Fence		227	3	1210.00
Red Rose	6-22	Cable Net	Cable Net				600.00
SE NE Section 11	22-23	Blast	Blast				300.00
SE NW Section 12	23-24	Grate	16'x 16' Grate				1044.38 (Installation) 2000.00 (Fabrication)
SE SW Section 1	25-25	Backfill	Backfill	57.3			286.50
	25-7	Backfill	Blast				300.00
SE SW Section 33	12-26	Backfill	Backfill	195.5			977.50
SW NW Section 21	13-27	Backfill	Backfill	109.4			547.00

HAZARDOUS MINE OPENING PROJECT 25
SILVER LAKE MINING DISTRICT - Page 2
QUANTITIES AND COSTS

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
SW SW Section 23	15-28	Backfill	Backfill	65.8			329.00
Silver Moss	16-29	Backfill	Backfill	51.9			259.50
	16-30	Backfill	Backfill	147.5			737.50
Sunshine	17-33	Grate	16'x 16' Specialty Grate				1333.58 (Fabrication) 2000.00 (Installation)
	17-38	Fence	Fence		80	2	450.00
Trigger	18-34	Fence	Fence		980	6	5050.00
	18-35	Culvert	Culvert				1500.00
	18-36	Lock	Lock				Cost included in Misc. Site Work
	18-37	Lock	Culvert				1500.00
Mobilization							679.70
Misc. Site Work							849.45
TOTAL				671.8	2269	18	42,948.87

**HAZARDOUS MINE OPENING PROJECT 25
RED LION MINING DISTRICT
QUANTITIES AND COSTS**

SITE NAME	NO.	SPECIFIED	CONSTRUCTED	C.Y.	L.F.	SIGNS	COST
Big Bill	2-1	Grate	16'x 16' Grate				1044.38 (Fabrication) 2000.00 (Installation)
	2-2	Fence	Fence		377	6	2035.00
	2-3	Fence	Fence		358	6	1915.00
Gold Brick	3-4	Fence	Fence		69	3-4	420.00
	3-5	Backfill	Backfill	44.4			222.00
	3-6	Backfill	Backfill	46.1			230.50
Nut Pine	4-8	Cable Net	16'x 16' Specialty Grate				1101.70 (Fabrication) 2000.00 (Installation)
Savage	1-9	Fence	Fence		98	2	540.00
Mobilization							155.20
Misc. Site Work							194.21
TOTAL				90.5	902	16	12,902.37

APPENDIX G

SLIDES AND SLIDE LOG

HAZARDOUS MINE OPENING PROJECT 25
CONSTRUCTION SLIDE LOG

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
1	8/88	Blue Eyed Nellie	Blue Eyed Nellie	2-1	Before, 50' N. of opening
2	8/88	Blue Eyed Nellie	Blue Eyed Nellie	2-1	Before, 20' N. of opening
3	4/23/90	Blue Eyed Nellie	Blue Eyed Nellie	2-1	Installing fence, 50' W. of opening
4	6/7/90	Blue Eyed Nellie	Blue Eyed Nellie	2-1	Complete fence, 50' W. of opening
5	8/88	Blue Eyed Nellie	Buck Gulch	3-2	Before, 10' W. of opening
6	9/88	Blue Eyed Nellie	Buck Gulch	3-2	Before, 50' W. of opening
7	6/8/90	Blue Eyed Nellie	Buck Gulch	3-2	Complete blast, 10' W. of opening
8	9/88	Blue Eyed Nellie	Buck Gulch	3-3	Before, 30' W. of opening
9	8/88	Blue Eyed Nellie	Buck Gulch	3-3	Before, 10' W. of opening
10	6/8/90	Blue Eyed Nellie	Buck Gulch	3-3	Complete blast, 10' W. of opening
14	9/88	Blue Eyed Nellie	Foster Creek	4-4	Before, 20' SE. of opening
12	9/88	Blue Eyed Nellie	Foster Creek	4-4	Before, 5' SE. of opening
13	10/26/89	Blue Eyed Nellie	Foster Creek	4-4	Before, 10' SE of opening
14	6/7/90	Blue Eyed Nellie	Foster Creek	4-4	Complete blast
15	9/88	Blue Eyed Nellie	Foster Creek	4-5	Before, 10' SE of opening
14	9/88	Blue Eyed Nellie	Foster Creek	4-5	Before, 5' SE of opening
17	6/7/90	Blue Eyed Nellie	Foster Creek	4-5	Coyote den
18	9/88	Blue Eyed Nellie	Foster Creek	4-6	Before, 25' SE of opening
14	9/88	Blue Eyed Nellie	Foster Creek	4-6	Before, 5' SE of opening
20	6/7/90	Blue Eyed Nellie	Foster Creek	4-6	Hand placing backfill in adit
21	6/7/90	Blue Eyed Nellie	Foster Creek	4-6	Complete closure
22	9/88	Blue Eyed Nellie	Gladstone	17-8	Before, 100' S. of opening
23	6/7/90	Blue Eyed Nellie	Gladstone	17-7	Complete fence
24	8/88	Blue Eyed Nellie	Gladstone	17-8	Before, 100' W. of opening
25	9/88	Blue Eyed Nellie	Gladstone	17-8	Before, 5' W. of opening
26	4/23/90	Blue Eyed Nellie	Gladstone	17-8	Installing fence, 50' NW. of opening
28	6/7/90	Blue Eyed Nellie	Gladstone	17-8	Complete fence installation, 100' W. of opening
28	9/88	Blue Eyed Nellie	Homestake	4-5	Before, 100' E. of opening
29	9/88	Blue Eyed Nellie	Homestake	7-9	Before, 5' N. of opening
30	6/6/90	Blue Eyed Nellie	Homestake	7-9	Installing fence, 100' E. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
38	6/7/90	Blue Eyed Nellie	Homestake	7-9	Complete fence, 100' N. of opening
32	6/690	Blue Eyed Nellie	Homestake	7-9	Seeding access road to site
38	9/88	Blue Eyed Nellie	Homestake	7-10	Before, 25' N. of opening
34	9/88	Blue Eyed Nellie	Homestake	7-10	Before, 5' N. of opening
35	6/7/90	Blue Eyed Nellie	Homestake	7-10	Complete fence, 10' E. of opening
40	6/7/90	Blue Eyed Nellie	Homestake	7-10	Complete fence, 5' E. of opening
37	9/88	Blue Eyed Nellie	Keystone	6-11	Before, 25' N. of opening
38	9/88	Blue Eyed Nellie	Keystone	6-14	Before, 5' S. of opening
40	9/88	Blue Eyed Nellie	Keystone	6-12	Before, 25' N. of opening
40	9/88	Blue Eyed Nellie	Keystone	6-12	Before, 5' S. of opening
41	9/88	Blue Eyed Nellie	Keystone	6-13	Before, 25' W. of opening
42	9/88	Blue Eyed Nellie	Keystone	6-13	Before, 5' S. of opening
40	9/88	Blue Eyed Nellie	Keystone	6-14	Before, 100' SE. of opening
44	9/88	Blue Eyed Nellie	Keystone	6-14	Before, 5' E. of opening
45	4/25/90	Blue Eyed Nellie	Keystone	6-11 thru 6-14	Installing fence, 100' N. of openings
46	6/6/90	Blue Eyed Nellie	Keystone	6-11 thru 6-14	Complete fence, 50' NW. of openings
47	6/6/90	Blue Eyed Nellie	Keystone	6-11 thru 6-14	Complete fence, 5' W. of openings
48	6/6/90	Blue Eyed Nellie	Keystone	6-11 thru 6-14	Seeding access road to sites
49	9/88	Blue Eyed Nellie	Keystone	6-15	Before, 50' E. of opening
50	9/88	Blue Eyed Nellie	Keystone	6-15	Before, 5' N. of opening
59	4/24/90	Blue Eyed Nellie	Keystone	6-15	Accessing site
52	4/24/90	Blue Eyed Nellie	Keystone	6-15	Accessing site
53	4/24/90	Blue Eyed Nellie	Keystone	6-15	Installing fence, 75' E. of opening
54	6/7/90	Blue Eyed Nellie	Keystone	6-15	Complete fence, 50' NE. of opening
55	9/88	Blue Eyed Nellie	Mohawk	10-16	Before, 100' E. of adit
56	9/88	Blue Eyed Nellie	Mohawk	10-16	Before, 10' E. of adit
59	5/7/90	Blue Eyed Nellie	Mohawk	10-16	Installing adit gate, 20' E. of adit
58	5/7/90	Blue Eyed Nellie	Mohawk	10-16	Installing adit gate, 30' NE. of adit
59	5/7/90	Blue Eyed Nellie	Mohawk	10-16	Installing adit gate, 10' E. of adit
60	5/29/90	Blue Eyed Nellie	Mohawk	10-16	Complete adit gate, 10' E. of adit
61	8/88	Blue Eyed Nellie	Mountain View	12-17	Before, 25' N. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
62	8/88	Blue Eyed Nellie	Mountain View	12-17	Before, 10' N. of opening
63	4/24/90	Blue Eyed Nellie	Mountain View	12-17	Installing fence, 50' S. of opening
64	4/24/90	Blue Eyed Nellie	Mountain View	12-17	Installing fence, 10' W. of opening
65	5/2/90	Blue Eyed Nellie	Mountain View	12-17	Complete fence, 25' S. of opening
66	8/88	Blue Eyed Nellie	Mountain View	12-18	Before, 30' NE of opening
67	8/88	Blue Eyed Nellie	Mountain View	12-18	Before, 5' NE. of opening
68	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Accessing site
69	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Accessing site
70	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Accessing site
71	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Accessing site
72	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Installing fence, 200' N. of opening
73	5/2/90	Blue Eyed Nellie	Mountain View	12-18	Installing fence, 50' NE. of opening
74	6/13/90	Blue Eyed Nellie	Mountain View	12-18	Seeded access route
75	7/12/90	Blue Eyed Nellie	NW NE Sec. 2	8-23	Before, 25' W. of opening
76	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-23	Backfilling shaft, 10' E. of opening
77	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-23	Backfilling shaft, 25' E. of opening
78	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-23	Backfilling shaft, 100' W. of opening
79	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-23	Backfill complete, 100' W. of opening
80	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Before, 25' W. of opening
81	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Backfilling shaft, 40' E. of opening
82	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Backfilling shaft, 50' W. of opening
83	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Seeded area, 50' W. of opening
84	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Seeded area, 15' W. of opening
85	7/31/90	Blue Eyed Nellie	NW NE Sec. 2	8-24	Kelly hump in access road
86	7/12/90	Blue Eyed Nellie	NW NW Sec. 2	9-25	Before, 75' S. of opening
87	9/88	Blue Eyed Nellie	NW NW Sec. 2	9-25	Before, 10' N. of opening
88	8/1/90	Blue Eyed Nellie	NW NW Sec. 2	9-25	Installing fence, 50' S. of opening
89	8/1/90	Blue Eyed Nellie	NW NW Sec. 2	9-25	Installing fence, 10' E. of opening
90	8/1/90	Blue Eyed Nellie	NW NW Sec. 2	9-25	Complete fence, 50' S. of opening
91	9/88	Blue Eyed Nellie	NW NW Sec. 25	11-26	Before, 25' S. of opening
92	5/31/90	Blue Eyed Nellie	NW NW Sec. 25	11-26	Installing fence, 10' W. of opening
93	5/31/90	Blue Eyed Nellie	NW NW Sec. 25	11-26	Installing fence, W. corner
94	6/4/90	Blue Eyed Nellie	NW NW Sec. 25	11-26	Installing fence, west side

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
95	6/4/90	Blue Eyed Nellie	NW NW Sec. 25	11-26	Complete fence, north side
96	6/4/90	Blue Eyed Nellie	NW NW Sec. 25	11-26	Complete fence, west side
97	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-28	Before, 25' W. of opening
98	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-28	Before, 10' W. of opening
99	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-28	Installing fence, 50' NW. of opening
100	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-28	Complete fence, 50' W. of opening
101	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-29	Before, 25' SW. of opening
102	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-29	Before, 10' SW. of opening
103	5/4/90	Blue Eyed Nellie	SE NE Sec. 14	13-29	Installing fence, 100' N. of opening
103	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-29	Complete fence, 100' N. of opening
100	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-30	Before, 25' W. of opening
106	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-30	Before, 5' S. of opening
100	5/4/90	Blue Eyed Nellie	SE NE Sec. 14	13-30	Installing fence, 50' NW. of opening
108	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-30	Complete fence, south side
100	8/31/89	Blue Eyed Nellie	SE NE Sec. 14	13-31	Before, 25' N. of opening
114	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-31	Installing fence, 25' NW. of opening
111	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-31	Complete fence, 25' NW. of opening
112	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-32	Accessing site
103	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-32	Before, 25' N. of opening
114	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-32	Before, 5' N. of opening
115	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-32	Complete fence, 50' N. of opening
116	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-33	Before, 50' N. of opening
117	8/88	Blue Eyed Nellie	SE NE Sec. 14	13-33	Before, 5' N. of opening
115	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-30	Installing fence, 50' N. of opening
115	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-33	Complete fence, 50' N. of opening
120	6/13/90	Blue Eyed Nellie	SE NE Sec. 14	13-33	Seeded access route
121	6/13/90	Blue Eyed Nellie	SE NE Sec. 14	13-33	Seeded access route
122	5/3/90	Blue Eyed Nellie	SE NE Sec. 14	13-33	Access route
123	8/88	Blue Eyed Nellie	SE NW Sec. 26	14-34	Before, 25' E. of opening
121	8/88	Blue Eyed Nellie	SE NW Sec. 26	14-34	Before, 5' N. of opening
125	6/13/90	Blue Eyed Nellie	SE NW Sec. 26	14-34	Complete blast, 25' E. of opening
126	9/88	Blue Eyed Nellie	SE NW Sec. 9	5-35	Before, 50' S. of opening
127	9/88	Blue Eyed Nellie	SE NW Sec. 9	5-35	Before, 10' S. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
128	6/11/90	Blue Eyed Nellie	SE NW Sec. 9	5-35	Horse packing materials
129	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-35	Horse packing materials
130	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-35	Installing fence, 10' W. of opening
141	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-35	Complete fence, 50' N. of opening
132	9/88	Blue Eyed Nellie	SE NW Sec. 9	5-35	Before, 5' S. of opening
133	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-36	Installing fence, 15' W. of opening
134	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-36	Installing fence, 25' N. of opening
135	6/19/90	Blue Eyed Nellie	SE NW Sec. 9	5-36	Complete fence, 25' N. of opening
136	9/88	Blue Eyed Nellie	SE NW Sec. 9	5-37	Before, 5' S. of opening
137	6/11/90	Blue Eyed Nellie	SE NW Sec. 9	5-37	Hand filling adit
138	6/11/90	Blue Eyed Nellie	SE NW Sec. 9	5-37	Complete blast
139	9/88	Blue Eyed Nellie	SE SW Sec. 22	15-38	Before, 25' W. of opening
140	5/23/90	Blue Eyed Nellie	SE SW Sec. 22	15-38	Complete blast
141	9/88	Blue Eyed Nellie	SE SW Sec. 22	15-39	Before, 25' W. of opening
142	5/23/90	Blue Eyed Nellie	SE SW Sec. 22	15-39	Complete blast
133	9/88	Blue Eyed Nellie	SE SW Sec. 22	15-40	Before, 25' W. of opening
144	5/23/90	Blue Eyed Nellie	SE SW Sec. 22	15-40	Complete blast
140	5/23/90	Blue Eyed Nellie	SE SW Sec. 22	15-41	Complete blast
146	5/23/90	Blue Eyed Nellie	SE SW Sec. 22	15-42	Complete blast
147	7/12/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Before, 25' SW. of opening
140	7/31/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Backfilling shaft, 25' W. of opening
140	7/31/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Backfilling shaft, 25' W. of opening
150	7/31/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Backfilling shaft, 25' W. of opening
151	7/31/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Backfill complete, 25' W. of opening
152	7/31/90	Blue Eyed Nellie	SW NW Sec. 10	16-43	Seeded area, 25' N. of opening
153	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-44	Before, 25' S. of opening
154	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-44	Before, 5' S. of opening
155	5/29/90	Blue Eyed Nellie	SW SW Sec. 21	18-44	Complete blast, 10' S. of opening
156	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-45	Before, 15' S. of opening
157	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-45	Before, 5' S. of opening
158	5/29/90	Blue Eyed Nellie	SW SW Sec. 21	18-45	Complete blast, 10' S. of opening
159	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-46	Before, 25' S. of opening
160	9/88	Blue Eyed Nellie	SW SW Sec. 21	18-46	Before, 5' S. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
161	5/29/90	Blue Eyed Nellie	SW SW Sec. 21	19-49	Complete blast, 10' S. of opening
162	8/88	Blue Eyed Nellie	Sheridan	19-47	Before, 5' W. of opening
163	8/88	Blue Eyed Nellie	Sheridan	19-47	Before, 25' W. of opening
164	5/29/90	Blue Eyed Nellie	Sheridan	19-47	Backfilling shaft, 25' W. of opening
165	5/29/90	Blue Eyed Nellie	Sheridan	19-47	Backfill complete, 50' SE. of opening
166	5/29/90	Blue Eyed Nellie	Sheridan	19-47	Seeded area, 50' SE. of opening
167	8/88	Blue Eyed Nellie	Sheridan	19-48	Before, 25' N. of opening
168	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Backfilling shaft, 50' N. of opening
169	5/29/90	Blue Eyed Nellie	Sheridan	19-48	Backfilling complete, 50' N. of opening
170	5/29/90	Blue Eyed Nellie	Sheridan	19-49	Seeded area, 25' N. of opening
171	8/88	Blue Eyed Nellie	Sheridan	19-49	Before, 5' E. of opening
172	8/88	Blue Eyed Nellie	Sheridan	19-49	Before, 25' N. of opening
173	5/29/90	Blue Eyed Nellie	Sheridan	19-49	Backfill complete, 25' N. of opening
174	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Crossing Warm Springs Cr.
175	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Crossing Warm Springs Cr.
176	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Crossing Warm Springs Cr.
177	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Crossing site, South bank
178	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Stuck Terex loader
179	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Stuck Terex loader
180	5/23/90	Blue Eyed Nellie	Sheridan	19-49	Crossing site, South bank

HAZARDOUS MINE OPENING PROJECT 25
CONSTRUCTION SLIDE LOG

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
181	8/15/89	Georgetown	NW NE Sec. 8	4-1	Before, 5' S. of opening
182	8/15/89	Georgetown	NW NE Sec. 8	4-1	Before, 20' N. of opening
183	9/8/89	Georgetown	NW NE Sec. 8	4-1	Before, 10' N. of opening
184	9/12/89	Georgetown	NW NE Sec. 8	4-1	Backfilling shaft, 15' E. of opening
185	9/12/90	Georgetown	NW NE Sec. 8	4-1	Complete backfill, 10' N. of opening
186	8/15/89	Georgetown	NW SW Sec. 9	1-2	Before, 75' S. of opening
187	8/15/89	Georgetown	NW SW Sec. 9	1-2	Before, 15' S. of opening
188	9/26/89	Georgetown	NW SW Sec. 9	1-2	Accessing portal, 30' S. of opening
189	9/26/89	Georgetown	NW SW Sec. 9	1-2	Removing mine car, 10' S. of opening
190	9/26/89	Georgetown	NW SW Sec. 9	1-2	Installing culvert, 30' S. of opening
191	9/26/89	Georgetown	NW SW Sec. 9	1-2	Complete culvert, 25' S. of opening
192	9/27/89	Georgetown	NW SW Sec. 9	1-2	Ore car removed from site #1-2
193	7/25/89	Georgetown	Orofino	5-7	Before, 5' E. of opening
194	7/25/89	Georgetown	Orofino	5-7	Before, 30' E. of opening
195	9/12/89	Georgetown	Orofino	5-7	Before, 10' E. of opening
196	9/27/89	Georgetown	Orofino	5-7	Installing fence, 20' E. of opening
197	10/11/89	Georgetown	Orofino	5-8	Installing fence, 30' E. of opening
198	10/11/89	Georgetown	Orofino	5-7	Complete fence, 50' N. of opening
199	7/25/89	Georgetown	Orofino	5-8	Before, 5' W. of opening
200	7/25/89	Georgetown	Orofino	5-8	Before, 15' W. of opening
201	9/12/89	Georgetown	Orofino	5-8	Before, 20' W. of opening
202	9/13/89	Georgetown	Orofino	5-8	Backfilling shaft, 15' W. of opening
203	9/13/89	Georgetown	Orofino	5-8	Backfilling shaft, 30' N. of opening
204	9/13/89	Georgetown	Orofino	5-8	Backfilling shaft, 30' W. of opening
205	9/13/89	Georgetown	Orofino	5-8	Backfill complete, 15' W. of opening
206	8/15/89	Georgetown	Pleideus	2-3	Before, 15' SW. of opening
207	8/15/89	Georgetown	Pleideus	2-3	Before, 30' SE. of opening
208	8/28/89	Georgetown	Pleideus	2-3	Before, 5' SE. of opening
209	9/12/89	Georgetown	Pleideus	2-3	Installing grate, 5' NW. of opening
210	9/12/89	Georgetown	Pleideus	2-3	Installing grate, 5' NW. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
211	9/12/89	Georgetown	Pleideus	2-3	Installing grate, 5' NW. of opening
212	9/13/89	Georgetown	Pleideus	2-3	Installing grate, 20' SE. of opening
213	9/13/89	Georgetown	Pleideus	2-3	Complete grate, 20' SE. of opening
211	8/16/89	Georgetown	Trilby	3-4	Before, 30' W. of opening
215	8/16/89	Georgetown	Trilby	3-4	Before, 5' W. of opening
216	9/21/89	Georgetown	Trilby	3-4	Before, 10' W. of opening
217	9/21/89	Georgetown	Trilby	3-4	Installing culvert, 15' W. of opening
218	9/21/89	Georgetown	Trilby	3-4	Installing culvert, 15' W. of opening
219	9/21/89	Georgetown	Trilby	3-4	Installing culvert, 15' W. of opening
220	9/21/89	Georgetown	Trilby	3-4	Complete culvert, 5' W. of opening
221	9/21/89	Georgetown	Trilby	3-6	Before, 30' W. of opening
222	9/21/89	Georgetown	Trilby	3-6	Before, 5' W. of opening
223	9/21/89	Georgetown	Trilby	3-6	Before, 15' W. of opening
224	9/21/89	Georgetown	Trilby	3-6	Installing culvert, 30' W. of opening
225	9/21/89	Georgetown	Trilby	3-6	Complete culvert, 30' W. of opening

HAZARDOUS MINE OPENING PROJECT 25
CONSTRUCTION SLIDE LOG

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
226	8/88	Heber	Alpha	2-1	Before, 5' E. of opening
227	5/22/90	Heber	Alpha	2-1	Backfilling shaft, 50' W. of opening
228	5/22/90	Heber	Alpha	2-1	Complete backfill, 10' N. of opening
229	8/88	Heber	Alpha	2-2	Before, 50' N. of opening
230	5/22/90	Heber	Alpha	2-2	Backfilling shaft, 50' N. of opening
231	5/23/90	Heber	Alpha	2-2	Complete backfill, 50' N. of opening
232	5/23/90	Heber	Alpha	2-2	Seeded area, 50' W. of opening
233	8/28/89	Heber	Alpha	2-3	Before, 15' N. of opening
234	8/88	Heber	Alpha	2-3	Before, 100' N. of opening
235	8/88	Heber	Alpha	2-3	Before, 100' S. of opening
236	8/88	Heber	Alpha	2-3	Before, 5' N. of opening
237	8/88	Heber	Alpha	2-3	Before, 25' N. of opening
238	5/18/90	Heber	Alpha	2-3	Installing grate, 100' S. of opening
239	5/18/90	Heber	Alpha	2-3	Installing grate, 20' E. of opening
240	5/18/90	Heber	Alpha	2-3	Installing grate, 50' N. of opening
241	5/18/90	Heber	Alpha	2-3	Complete grate, 20' S. of opening
242	5/23/90	Heber	Alpha	2-3	Seeded access road to site #2-3
243	8/88	Heber	Moonlight	1-4	Before, 15' NE. of opening
244	8/88	Heber	Moonlight	1-4	Before, 5' NE. of opening
245	5/21/90	Heber	Moonlight	1-4	Installing cable net, 5' NE. of opening
246	5/21/90	Heber	Moonlight	1-4	Complete cable net, 5' NE. of opening
247	8/88	Heber	Moonlight	1-5	Before, 10' E. of opening
248	8/88	Heber	Moonlight	1-5	Before, 5' E. of opening
249	5/21/90	Heber	Moonlight	1-5	Installing fence, east side
250	5/22/90	Heber	Moonlight	1-5	Complete fence, west side
251	5/22/90	Heber	Moonlight	1-5	Complete fence, north side
252	8/88	Heber	Pennsylvania	3-6	Before, 20' N. of opening
253	8/88	Heber	Pennsylvania	3-6	Before, 50' S. of opening
254	8/88	Heber	Pennsylvania	3-7	Before, 5' S. of opening
255	8/88	Heber	Pennsylvania	3-7	Before, 50' W. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
256	8/88	Heber	Pennsylvania	3-7	Before, 75' S. of opening
257	5/17/90	Heber	Pennsylvania	3-6 & 3-7	Installing fence, 50' S. of opening
258	5/17/90	Heber	Pennsylvania	3-6 & 3-7	Installing fence, 25' W. of opening
259	5/17/90	Heber	Pennsylvania	3-6 & 3-7	Installing fence, 10' NW. of opening
260	5/31/90	Heber	Pennsylvania	3-6 & 3-7	Complete fence, 10' NW. of opening
261	5/31/90	Heber	Pennsylvania	3-6 & 3-7	Complete fence, 10' W. of opening
262	8/88	Heber	SW SE Sec. 15	4-8	Before, 25' N. of opening
263	8/88	Heber	SW SE Sec. 15	4-8	Before, 5' N. of opening
264	8/88	Heber	SW SE Sec. 15	4-9	Before, 5' N. of opening
265	8/88	Heber	SW SE Sec. 15	4-9	Before, 50' W. of opening
266	5/16/90	Heber	SW SE Sec. 15	4-8 & 4-9	Installing fence, 100' S. of opening
267	5/23/90	Heber	SW SE Sec. 15	4-8 & 4-9	Complete fence, 25' N. of opening
268	8/88	Heber	SW SE Sec. 33	5-10	Before, 25' S. of opening
269	8/88	Heber	SW SE Sec. 33	5-10	Before, 5' S. of opening
270	6/8/90	Heber	SW SE Sec. 33	5-10	Backfilling shaft, 25' S. of opening
271	6/8/90	Heber	SW SE Sec. 33	5-10	Complete backfill and seeded area
272	5/8/90	Heber			Washing equipment
273	5/8/90	Heber			Washing equipment
274	5/8/90	Heber			Washing equipment

HAZARDOUS MINE OPENING PROJECT 25
CONSTRUCTION SLIDE LOG

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
275	10/25/89	Silver Lake	Clay Charlie	1-1	Before, 15' W. of opening
276	8/88	Silver Lake	Clay Charlie	1-1	Before, 15' N. of opening
277	6/18/90	Silver Lake	Clay Charlie	1-1	Installing fence, 25' N. of opening
278	8/1/90	Silver Lake	Clay Charlie	1-1	Installing fence, 25' N. of opening
279	8/1/90	Silver Lake	Clay Charlie	1-1	Complete fence, 25' N. of opening
280	10/25/89	Silver Lake	Clay Charlie	1-2	Before, 30' NW. of opening
281	8/88	Silver Lake	Clay Charlie	1-2	Before, 5' NW. of opening
282	6/18/90	Silver Lake	Clay Charlie	1-2	Installing cable net, 15' NW. of adit
283	6/18/90	Silver Lake	Clay Charlie	1-2	Complete cable net, 15' NW. of adit
284	10/25/89	Silver Lake	Clay Charlie	1-3	Before, 50' S. of opening
285	6/18/90	Silver Lake	Clay Charlie	1-3	Complete blast, 50' S. of opening
286	9/15/89	Silver Lake	Daly Gul. Placer	2-5	Before, 15' W. of opening
287	9/19/89	Silver Lake	Daly Gul. Placer	2-5	Backfilling adit, 20' W. of opening
288	9/15/89	Silver Lake	Daly Gul. Placer	2-5	Complete backfill and seeded area
289	9/88	Silver Lake	Gold Coin #8	4-6	Before, 30' W. of opening
290	9/14/89	Silver Lake	Gold Coin #8	4-6	Before, 15' W. of opening
291	9/14/89	Silver Lake	Gold Coin #8	4-6	Installing grate, 20' E. of opening
292	9/14/89	Silver Lake	Gold Coin #8	4-6	Installing grate, 20' E. of opening
293	9/19/89	Silver Lake	Gold Coin #8	4-6	Complete grate, 20' W. of opening
294	5/30/90	Silver Lake	Lost Track	19-8	Before, 50' E. of adit
295	8/88	Silver Lake	Lost Track	19-8	Before, 5' E. of adit
296	5/30/90	Silver Lake	Lost Track	19-8	Installing culvert, 50' E. of adit
297	5/30/90	Silver Lake	Lost Track	19-8	Installing culvert, 50' E. of adit
298	5/30/90	Silver Lake	Lost Track	19-8	Complete culvert and seeded area
299	8/26/89	Silver Lake	Lucky Blue	5-9	Before, 15' NW. of adit
300	9/88	Silver Lake	Lucky Blue	5-9	Before, 5' NW. of adit
301	10/25/89	Silver Lake	Lucky Blue	5-9	Complete blast, 10' NW. of adit
302	10/26/89	Silver Lake	Lucky Blue	5-9	Complete blast and seeded area
303	9/88	Silver Lake	Lucky Blue	5-10	Before, 5' W. of adit
304	10/25/89	Silver Lake	Lucky Blue	5-10	Before, 20' W. of adit

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
305	10/25/89	Silver Lake	Lucky Blue	5-10	Drilling to place blast charges
306	10/26/89	Silver Lake	Lucky Blue	5-10	Complete blast, 5' W. of adit
307	10/26/89	Silver Lake	Lucky Blue	5-10	Complete blast and seeded area
308	8/88	Silver Lake	Minnie Lee	20-11	Before, 50' E. of adit
309	9/88	Silver Lake	Minnie Lee	20-11	Before, 5' E. of adit
319	10/16/89	Silver Lake	Minnie Lee	20-11	Installing culvert, 20' E. of adit
311	10/18/89	Silver Lake	Minnie Lee	20-11	Installing hatch cover, 10' E. of adit
312	10/18/89	Silver Lake	Minnie Lee	20-11	Complete culvert and seeded area
313	9/88	Silver Lake	NE SE Sec. 7	8-12	Before, 15' W. of opening
314	8/88	Silver Lake	NE SE Sec. 7	8-12	Before, 5' W. of opening
315	6/5/90	Silver Lake	NE SE Sec. 7	8-12	Complete fence, 5' E. of opening
316	8/88	Silver Lake	NE SE Sec. 7	8-13	Before, 50' S. of shaft
317	8/88	Silver Lake	NE SE Sec. 7	8-13	Before, 5' S. of shaft
319	6/5/90	Silver Lake	NE SE Sec. 7	8-13	Installing fence, 25' S. of shaft
319	6/5/90	Silver Lake	NE SE Sec. 7	8-13	Installing fence east side
320	6/5/90	Silver Lake	NE SE Sec. 7	8-13	Complete fence, 50' S. of shaft
329	10/18/89	Silver Lake	NW SW Sec. 27	14-16	Before, 10' S. of opening
322	10/18/89	Silver Lake	NW SW Sec. 27	10-14	Complete blast, 10' S. of opening
323	8/88	Silver Lake	NW SW Sec. 27	10-15	Before, 10' S. of opening
324	10/18/89	Silver Lake	NW SW Sec. 27	10-15	Complete blast, 15' S. of opening
325	9/88	Silver Lake	New Year	14-16	Before, 20' W. of shaft
326	9/88	Silver Lake	New Year	14-16	Before, 5' W. of shaft
327	10/25/89	Silver Lake	New Year	14-16	Installing grate, 15' W. of shaft
328	10/26/89	Silver Lake	New Year	14-16	Complete grate, 20' W. of shaft
329	9/88	Silver Lake	New Year	14-17	Before, 75' W. of opening
330	10/24/89	Silver Lake	New Year	14-17	Installing fence, north side
331	6/5/90	Silver Lake	New Year	14-17	Installing fence, south side
332	6/5/90	Silver Lake	New Year	14-17	Complete fence, south side
333	6/5/90	Silver Lake	New Year	14-17	Complete fence, east side
334	6/5/90	Silver Lake	New Year	14-17	Complete fence, west side
335	6/5/90	Silver Lake	New Year	14-17	Complete fence, north side

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
336	9/22/89	Silver Lake	Old Bonanza	11-18	Before, 10' S. of adit
337	9/22/89	Silver Lake	Old Bonanza	11-18	Installing culvert, 25' E. of adit
338	9/22/89	Silver Lake	Old Bonanza	11-18	Installing culvert, 25' E. of adit
339	9/22/89	Silver Lake	Old Bonanza	11-18	Installing culvert, 10' S. of adit
340	9/22/89	Silver Lake	Old Bonanza	11-18	Installing culvert, 10' S. of adit
340	9/25/89	Silver Lake	Old Bonanza	11-19	Complete culvert, 10' S. of adit
342	9/25/89	Silver Lake	Old Bonanza	11-19	Before, 25' S. of adit
343	9/88	Silver Lake	Old Bonanza	11-19	Before, 5' S. of adit
344	9/25/89	Silver Lake	Old Bonanza	11-19	Installing culvert, 20' S. of adit
340	9/25/89	Silver Lake	Old Bonanza	11-19	Installing culvert, 15' S. of adit
346	9/26/89	Silver Lake	Old Bonanza	11-19	Complete culvert and seeded area
347	9/88	Silver Lake	Old Bonanza	11-20	Before, 20' S. of adit
348	9/22/89	Silver Lake	Old Bonanza	11-20	Installing culvert, 35' S. of adit
346	9/25/89	Silver Lake	Old Bonanza	11-20	Complete culvert and seeded area
350	8/6/90	Silver Lake	Old Bonanza	11-20	Culvert removed from adit
351	8/6/90	Silver Lake	Old Bonanza	11-20	Damaged culvert hatch and lock
352	9/88	Silver Lake	Old Bonanza	11-21	Before, 5' S. of opening
353	10/11/89	Silver Lake	Old Bonanza	11-21	Before, 20' S. of opening
354	10/13/89	Silver Lake	Old Bonanza	11-21	Mixing concrete for corner posts
355	10/13/89	Silver Lake	Old Bonanza	11-21	Installing corner posts
356	10/13/89	Silver Lake	Old Bonanza	11-21	Installing corner posts
357	10/13/89	Silver Lake	Old Bonanza	11-21	Installing corner posts
358	10/26/89	Silver Lake	Old Bonanza	11-21	Complete fence, 25' SW. of opening
359	10/26/89	Silver Lake	Old Bonanza	11-21	Complete fence, 20' SE. of opening
360	9/88	Silver Lake	Red Rose	6-22	Before, 30' N. of adit
361	6/7/90	Silver Lake	Red Rose	6-22	Installing cable net, 30' N. of adit
362	6/19/90	Silver Lake	Red Rose	6-22	Complete cable net, 30' N. of adit
363	10/19/89	Silver Lake	SE NE Sec. 11	22-23	Before, 15' E. of adit
364	10/19/89	Silver Lake	SE NE Sec. 11	22-23	Complete blast and seeded area
365	10/18/89	Silver Lake	SE NW Sec. 12	23-24	Before, 30' N. of shaft
366	10/18/89	Silver Lake	SE NW Sec. 12	23-24	Installing grate, 20' N. of shaft
367	10/19/89	Silver Lake	SE NW Sec. 12	23-24	Complete grate and seeded area
368	8/88	Silver Lake	SE SW Sec.1	25-25	Before, 10' N. of adit

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
369	10/18/89	Silver Lake	SE SW Sec. 1	25-25	Before, 25' N. of adit
370	10/18/89	Silver Lake	SE SW Sec. 1	25-25	Backfilling adit, 25' N. of adit
371	10/18/89	Silver Lake	SE SW Sec. 1	25-25	Backfilling adit, 20' N. of adit
372	10/18/89	Silver Lake	SE SW Sec. 1	25-25	Complete backfill, 20' N. of adit
373	10/18/89	Silver Lake	SE SW Sec. 1	25-25	Complete backfill and seeded area
373	10/18/89	Silver Lake	SE SW Sec. 1	25-7	Before, 20' E. of opening
375	8/88	Silver Lake	SE SW Sec. 1	25-7	Before, 5' E. of opening
396	10/18/89	Silver Lake	SE SW Sec. 1	25-7	Complete blast, 10' E. of opening
397	8/88	Silver Lake	SE SW Sec. 33	12-26	Before, 50' S. of opening
378	10/3/89	Silver Lake	SE SW Sec. 33	12-26	Before, 5' S. of opening
379	10/3/89	Silver Lake	SE SW Sec. 33	12-26	Complete backfill and seeded area
380	9/19/89	Silver Lake	SW NW Sec. 21	13-27	Before, 25' W. of adit
381	9/88	Silver Lake	SW NW Sec. 21	13-27	Before, 5' W. of adit
382	9/19/89	Silver Lake	SW NW Sec. 21	13-27	Backfilling adit, 50' W. of adit
383	9/19/89	Silver Lake	SW NW Sec. 21	13-27	Backfilling adit, 50' W. of adit
384	9/19/89	Silver Lake	SW NW Sec. 21	13-27	Complete backfill, 50' W. of adit
395	9/20/89	Silver Lake	SW NW Sec. 21	13-27	Complete backfill and seeded area
386	9/20/89	Silver Lake	SW NW Sec. 21	13-27	Seeded area
387	9/88	Silver Lake	SW SW Sec. 23	15-28	Before, 30' S. of adit
388	9/88	Silver Lake	SW SW Sec. 23	15-28	Before, 5' S. of adit
389	10/5/89	Silver Lake	SW SW Sec. 23	15-28	Backfilling adit, 20' S. of adit
390	10/5/89	Silver Lake	SW SW Sec. 23	15-28	Complete backfill and seeded area
391	8/88	Silver Lake	Silver Moss	16-29	Before, 75' N. of adit
392	8/88	Silver Lake	Silver Moss	16-29	Before, 15' N. of adit
393	10/4/89	Silver Lake	Silver Moss	16-29	Backfilling adit, 20' N. of adit
394	10/4/89	Silver Lake	Silver Moss	16-29	Complete backfill, 30' N. of adit
395	10/4/89	Silver Lake	Silver Moss	16-29	Complete backfill and seeded area
396	8/88	Silver Lake	Silver Moss	16-30	Before, 30' NW. of shaft
397	10/4/89	Silver Lake	Silver Moss	16-30	Before, 15' SE. of shaft
378	10/4/89	Silver Lake	Silver Moss	16-30	Backfilling shaft, 25' SE. of shaft
399	10/6/89	Silver Lake	Silver Moss	16-30	Complete backfill and seeded area
400	10/4/89	Silver Lake	Silver Moss	Bridge	Trackhoe thru bridge
401	10/4/89	Silver Lake	Silver Moss	Bridge	Collapsed bridge

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
402	10/4/89	Silver Lake	Silver Moss	Bridge	Collapsed bridge and trackhoe
403	10/4/89	Silver Lake	Silver Moss	Bridge	Clearing debris from stream
404	10/4/89	Silver Lake	Silver Moss	Bridge	Clearing debris from stream
405	10/4/89	Silver Lake	Silver Moss	Bridge	Bridge debris
406	10/4/89	Silver Lake	Silver Moss	Bridge	Bridge debris
407	10/4/89	Silver Lake	Silver Moss	Bridge	Bridge debris
408	10/4/89	Silver Lake	Silver Moss	Bridge	Collapsed bridge
409	10/4/89	Silver Lake	Silver Moss	Bridge	Stream below bridge
410	10/4/89	Silver Lake	Silver Moss	Bridge	Upstream of bridge
411	10/4/89	Silver Lake	Silver Moss	Bridge	Clearing debris from stream
412	10/4/89	Silver Lake	Silver Moss	Bridge	Clearing debris from stream
413	10/4/89	Silver Lake	Silver Moss	Bridge	Stream crossing
414	7/12/90	Silver Lake	Silver Moss	Bridge	Stream crossing
415	8/88	Silver Lake	Sunshine	17-33	Before, 5' S. of shaft
416	10/23/89	Silver Lake	Sunshine	17-33	Before, 25' S. of shaft
417	10/23/89	Silver Lake	Sunshine	17-33	Removing loose timber from headframe
418	10/23/89	Silver Lake	Sunshine	17-33	Working on grate
419	10/23/89	Silver Lake	Sunshine	17-33	Complete grate, 15' S. of shaft
420	8/88	Silver Lake	Sunshine	17-38	Before, 5' N. of opening
421	10/16/89	Silver Lake	Sunshine	17-38	Before, 15' SW. of opening
422	10/16/89	Silver Lake	Sunshine	17-38	Installing fence, 25' SW. of opening
423	10/23/89	Silver Lake	Sunshine	17-38	Complete fence, 25' SW. of opening
424	8/88	Silver Lake	Trigger	18-34	Before, 15' N. of opening
425	8/88	Silver Lake	Trigger	18-34	Before, 20' S. of opening
426	10/3/89	Silver Lake	Trigger	18-34	Before, 30' N. of opening
427	10/3/89	Silver Lake	Trigger	18-34	Installing fence west side
428	10/27/89	Silver Lake	Trigger	18-34	Complete fence, north side
429	10/27/89	Silver Lake	Trigger	18-34	Complete fence, west side
430	10/27/89	Silver Lake	Trigger	18-34	Complete fence, east side
431	10/27/89	Silver Lake	Trigger	18-34	Complete fence, east side
432	8/88	Silver Lake	Trigger	18-35	Before, 50' W. of adit
433	8/88	Silver Lake	Trigger	18-35	Before, 5' W. of adit
434	10/3/89	Silver Lake	Trigger	18-35	Installing culvert, 25' W. of adit

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
435	10/3/89	Silver Lake	Trigger	18-35	Installed culvert, 25' S. of adit
436	10/3/89	Silver Lake	Trigger	18-35	Complete culvert and seeded area
437	10/5/89	Silver Lake	Trigger	18-36	Before, 50' W. of adit
438	8/88	Silver Lake	Trigger	18-36	Before, 15' W. of adit
439	10/5/89	Silver Lake	Trigger	18-36	Installing lock box
440	10/5/89	Silver Lake	Trigger	18-36	Complete lock box, 5' W. of adit
441	8/88	Silver Lake	Trigger	18-37	Before, inside adit
442	10/2/89	Silver Lake	Trigger	18-37	Before, 5' W. of adit
443	10/2/89	Silver Lake	Trigger	18-37	Clearing portal for culvert
444	10/2/89	Silver Lake	Trigger	18-37	Installed culvert, 20' W. of adit
445	10/3/89	Silver Lake	Trigger	18-37	Complete culvert, 20' W. of adit

HAZARDOUS MINE OPENING PROJECT 25
CONSTRUCTION SLIDE LOG

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
446	8/17/89	Red Lion	Big Bill	2-1	Before, 25' N. of opening
447	8/28/89	Red Lion	Big Bill	2-1	Before, 15' W. of opening
447	9/6/89	Red Lion	Big Bill	2-1	Accessing area
447	9/6/89	Red Lion	Big Bill	2-1	Clearing debris from around shaft
450	9/6/89	Red Lion	Big Bill	2-1	Clearing debris from around shaft
451	9/6/89	Red Lion	Big Bill	2-1	Installing grate, 15' W. of shaft
452	9/11/89	Red Lion	Big Bill	2-1	Seeding disturbed area
453	9/11/89	Red Lion	Big Bill	2-1	Seeding disturbed area
454	9/11/89	Red Lion	Big Bill	2-1	Complete grate, 15' W. of shaft
455	9/11/89	Red Lion	Big Bill	2-1	Seeded access route
456	9/11/89	Red Lion	Big Bill	2-1	Seeded access route
457	8/17/89	Red Lion	Big Bill	2-2	Before, 20' N. of opening
458	8/17/89	Red Lion	Big Bill	2-2	Before, 10' W. of opening
459	8/28/89	Red Lion	Big Bill	2-2	Before, 5' W. of opening
460	8/28/89	Red Lion	Big Bill	2-2	Before, 5' W. of opening
461	10/9/89	Red Lion	Big Bill	2-2	Installing fence, 10' W. of opening
462	10/12/89	Red Lion	Big Bill	2-2	Complete fence, 30' N. of opening
463	8/17/89	Red Lion	Big Bill	2-3	Before, 10' W. of opening
464	8/17/89	Red Lion	Big Bill	2-3	Before, 30' SE. of opening
465	8/28/89	Red Lion	Big Bill	2-3	Before, 30' SE. of opening
466	8/28/89	Red Lion	Big Bill	2-3	Before, 5' S. of opening
467	10/12/89	Red Lion	Big Bill	2-3	Complete fence, north side
468	10/12/89	Red Lion	Big Bill	2-3	Complete fence, south side
469	8/17/89	Red Lion	Gold Brick	3-4	Before, 15' N. of opening
470	8/17/89	Red Lion	Gold Brick	3-4	Before, 5' W. of opening
471	10/9/89	Red Lion	Gold Brick	3-4	Before, 15' NE. of opening
472	10/20/89	Red Lion	Gold Brick	3-4	Complete fence, 25' NW. of opening
473	8/17/89	Red Lion	Gold Brick	3-5	Before, 10' E. of opening
474	8/17/89	Red Lion	Gold Brick	3-5	Before, 15' N. of opening
475	8/17/89	Red Lion	Gold Brick	3-6	Before, 5' N. of opening

SLIDE #	DATE	MINING DISTRICT	SITE NAME	MINE OPENING #	SEQUENCE, VANTAGE POINT & DESCRIPTION
478	8/17/89	Red Lion	Gold Brick	3-6	Before, 20' E. of opening
477	9/11/89	Red Lion	Gold Brick	3-5 & 3-6	Backfilling shafts
478	9/11/89	Red Lion	Gold Brick	3-5 & 3-6	Backfilling shafts
479	9/12/89	Red Lion	Gold Brick	3-5 & 3-6	Complete backfill and seeded area
480	9/12/89	Red Lion	Gold Brick	3-5 & 3-6	Complete backfill and seeded area
481	10/17/89	Red Lion	Nut Pine	4-8	Before, 15' N. of shaft
482	10/17/89	Red Lion	Nut Pine	4-8	Constructing grate on-site
483	10/17/89	Red Lion	Nut Pine	4-8	Constructing grate on-site
484	10/17/89	Red Lion	Nut Pine	4-8	Welding grate on-site
485	10/19/89	Red Lion	Nut Pine	4-8	Complete grate, 15' W. of shaft
486	8/88	Red Lion	Savage	1-7	Before, 10' E. of shaft
487	10/17/89	Red Lion	Savage	1-7	Before, 5' E. of shaft
488	10/20/89	Red Lion	Savage	1-7	Complete fence, 10' S. of shaft
44		Red Lion			
45		Red Lion			

